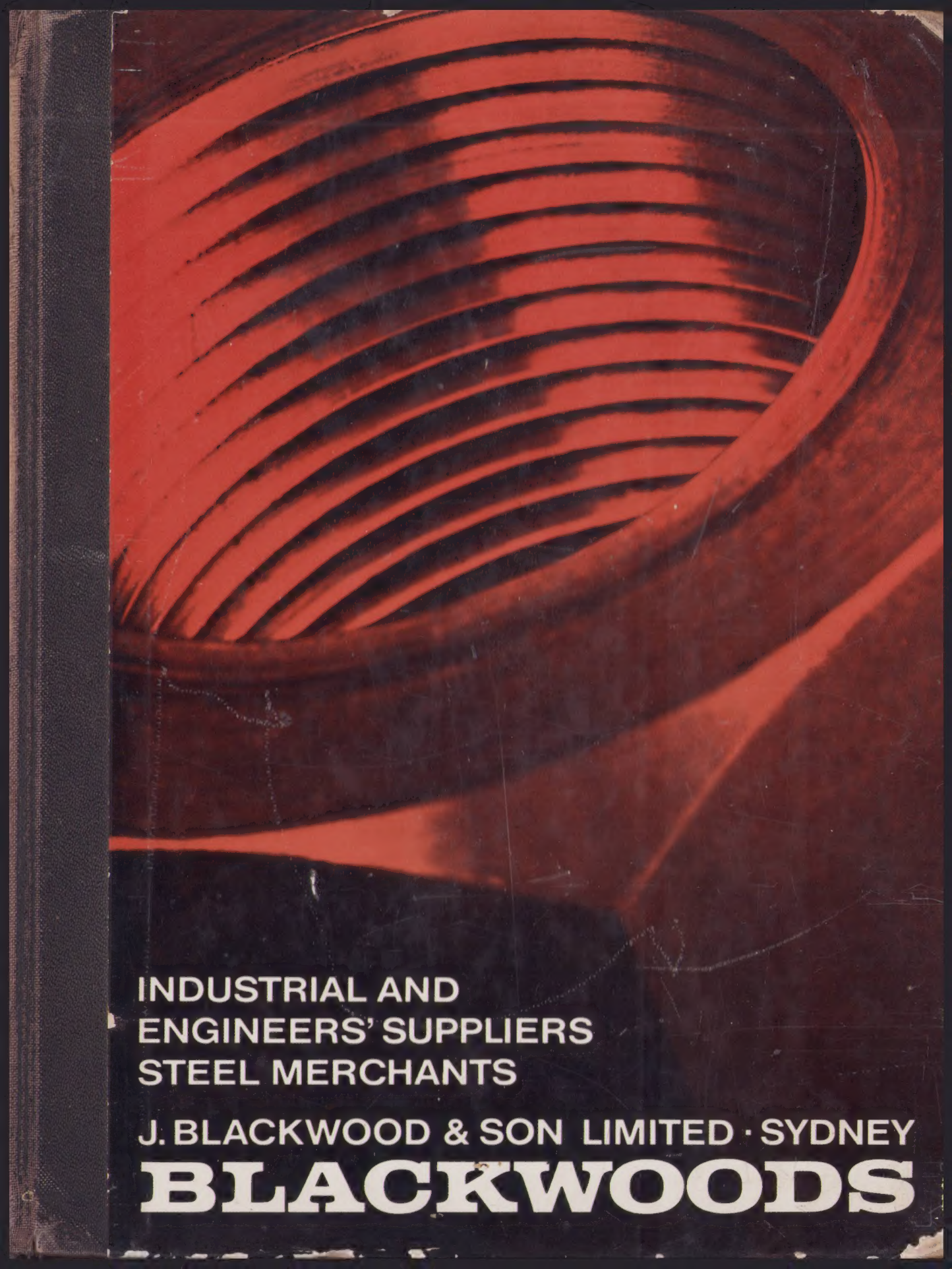

INDUSTRIAL AND
ENGINEERS' SUPPLIERS
STEEL MERCHANTS
J. BLACKWOOD & SON LIMITED · SYDNEY
BLACKWOODS

DESIGNED BY W. KNIGHT

PRINTED IN AUSTRALIA BY W. NEVILL & CO. LIMITED
66 EUSTON ROAD, ALEXANDRIA, 2015.

J. BLACKWOOD & SON LIMITED

INDUSTRIAL AND ENGINEERS' SUPPLIERS • STEEL MERCHANTS

ESTABLISHED 1878

Head Office and Warehouse
1-5 CARTER STREET, LIDCOMBE 2141
Telephone **648 8501** • Telex **21452**

Steelyard
YOUNG & DANKS STREETS, WATERLOO 2017
Telephone **69 6633**

Brisbane Warehouse
36 BALACLAVA STREET, WOOLLOONGABBA, QUEENSLAND 4012
Telephone **91 3704**

GENERAL CATALOGUE–1970

Subsidiary Companies

A. E. BAKER & CO. PTY. LTD.
138 George Street, Parramatta, N.S.W. 2150
Telephone 635 5011

J. BLACKWOOD & SON (CANBERRA) PTY. LTD.
Canberra Ave. & Yallourn Street, Fyshwick, A.C.T. 2600
Telephone 9 0361 Telex 62215

UNITED ENGINEERING SUPPLY CO. PTY. LTD.
14 Rupert Street, Collingwood, Victoria 3066
Telephone 419 2111 Telex 31534

VICTORIA BERINN CO. PTY. LTD.
14 Rupert Street, Collingwood, Victoria 3066
Telephone 419 2111 Telex 31534

TURNER PRODUCTS PTY. LTD.
191 Arthur Street, Homebush West, N.S.W. 2140
Telephone 764 1111

ASSOCIATED LIGHTING INDUSTRIES PTY. LTD.
45 Asquith Street, Auburn 2144
Telephone 648 2017

CABLE & ELECTRICAL SUPPLIES PTY. LTD.
45 Asquith Street, Auburn 2144
Telephone 648 2017

AUSTRALIAN LIGHT & POWER CO. PTY. LTD.
11 Park Road, Rydalmere, N.S.W. 2116
Telephone 638 1430

INDEX

GENERAL CATALOGUE 1970

A

Page

ABRASIVE Belts 280
- Cut Off Wheels 264
- Discs 282
- Paper 280
- Rolls 280
- Sharpening Stones 278
- Sheets 280
- Sticks 275
- Wheels 261
- Wheel Dressers 271
- Wheel Segments 265

ACETYLENE-AIR EQUIPMENT 140
ACETYLENE TUBING 105
ACID CORED SOLDER 352
ADHESIVES 347
ADHESIVES 3M BRAND 348
A. & F. BEARING METALS 122
AIR-FUEL GAS EQUIPMENT 140
AIR Compressors 161
- Guns 94
- Hose 105
- Hose Fittings 92
- Safety Valves 30
- Tools 508
- Transformer 160

ALLEN KEYS 247
ALUMINIUM Brazing Flux 142
- Rivets 255
- Sheet 118
- Solder 120
- Tube 111

"ANCHOR" EQUIPMENT 164
ANCHORS Masonry 257
ANGLE Cutters 416
- Grinders 291
- Iron 128

ANGLE PLATES 448
ANTI FRICTION METALS 122
ANVILS 386
ANVIL TOOLS 386
APEXIOR 346
APRONS Welders 345
ARC WELDING EQUIPMENT 145

Page

ARNOLD DE VILBISS SPRAY PAINTING EQUIPMENT 159
ASBESTOS PRODUCTS & PACKINGS 220
AUGERS 391
AUSTRA MACHINE TOOL ACCESSORIES 423
AUTOPOSITIVE INJECTORS 32
AXES 387

B

BABBIT METAL 122
BACK STAND IDLER 281
BACK UP PAD ASSEMBLY 282
"BAKER'S" Soldering Fluid & Fluxes 352
BALL COCKS 54
BALL JOINTS 462
BALL OILERS 496
BALL PEIN HAMMERS 383
BALL TRANSFERS 213
BANDSAW Blade 379
BANGOR SLIDING DOOR TRACK 345
BARREL DRIFTS 384
BARRIER CREAM 334
BARROWS 218
"BASSICK" Casters 201
BASIN CONNECTORS 55
BATHROOM FITTINGS, Chrome Plated 55
BEAM TROLLEYS 166
BEAMS, Steel 129
BEARING Blue 335
- Bronze 121
- Metal 122
- Metal Thermometers 228
- Scrapers 389

BEARINGS 458
BELT Fasteners 463
- Hooks 463
- Lacing Machine 463
- Laces 463

BELTING, Leather & Canvas 463
- Vee 464

BURNAX FLUID 352

INDEX

Page

BENCH DRILLS 318
BENCH DRILL STANDS 290
BENCH GRINDERS, Electric 314
BENCH VICES 371
BENDERS Bar 322
Tubes 324
Pipe 324
BEVEL PROTRACTORS 439
BIB COCKS 52
BINDERS, Load 187
BITS, Auger 391
Lathe Tool 422
BITUMINOUS PAINT 350
"BLACKHAWK" EQUIPMENT 325
BLACK & DECKER PORTABLE ELECTRIC TOOLS 296
BLACK WIRE 130
BLACKSMITHS TOOLS 386
BLACK STEEL, SHEET 124
BLADES Hacksaw 379
BLOWERS, Portable Electric 293
BLOW GUNS 94
BLOW LAMPS & PRICKERS 394
BLOW-OFF COCKS 27
BLOW-OFF VALVES 27
BOILED OIL 346
BOILER Door Joints 221
Gauge Glasses 225
Lagging 222
Mountings 29
Tube Brushes 331
Tube Expanders 501
BOLSTERS 384
BOLTS Brass 230
Black 234
Bright 229
Eye 180
High Tensile 231
Precision Cold Formed 231
Stainless Steel 230
BOLT CUTTERS 368
BONNEY FORGE WELDING FITTINGS 502
BOOSTER CONVEYOR 215
BORING BARS 422
BOSCH PORTABLE ELECTRIC TOOLS 302
"BOSTIK" CEMENT 347
"BOTANITE" 346
BOW SHACKLES 183
BOX SPANNERS 362

Page

BOXWOOD RULES 445
BRACES Carpenters 391
"BRAEMAR" CONVEYORS 212
BRASS Bars 119
Bolts 230
Condenser Tube 110
Flat Section 119
Flat Washers 236
Hinges 337
Gauze, Woven Wire 119
Nuts 238
Sheet 118
Shim 118
Tube 110
BRASSO 334
BRASSWARE, Plumbers 55
BRAZING Alloy 142
Flanges 56
Fluxes 142
Lamps 394
BREAST DRILLS 392
BRICK Drills 384
Bolsters 384
BRICKS Fire 351
BRIDGE REAMERS 413
BRONZE Bearing 121
Sheet 118
Sintalite Bushes 461
Unions 29
Wire 119
BROOM HANDLES 388
BROOMS and Brushes 334
BRUSHES Boiler Tube 331
Circular Wire 330
Condenser Tube 331
Decarbonising 333
Dusting 334
Foundry 334
Paint 334
Sash 334
Scratch Wire 334
Scrubbing 334
Steel Wire 334
Welders 334
Whitewash 334
Wire Wheel 330
B.T.M. TUBES 111
BUBBLER COCKS 53
BUCKETS, Galvanised 334

INDEX

Page

BUSHING, "KEMBRONZE" 121
BUTT HINGES 336
BUTTON DIES 408
BUTTON STOCKS 407
BUTWELDING FITTINGS 44
B7 STUDS 240

C

C.R.C. COMPOUNDS 346
C. & H. GEARED MOTORS & VARIABLE DRIVES 483
CALCIUM CHLORIDE 334
CALIPERS 441
CANS Oil 500
CAPS Malleable Iron 38
Welding 45
Wrought Iron 42
CAPILLARY FITTINGS 62
CARB-O-LOCK INSERTS 430
CARBOLOY CEMENTED CARBIDE 425
CARBON TETRACHLORIDE 334
CARGO HOOKS 189
CARPENTERS Pencils 392
Tools 391
Vice 371
CASE Openers 386
Slings 172
CAST IRON STICK 118
CAST IRON WHEELS 199
CASTERS 198
CASTOR OIL 346
CAULKING COMPOUND 347
CAULKING COTTON 347
CAUSTIC SODA 334
CEMENT 351
CEMENT Gasket 225
CENTRE Drills 401
Gauges 439
Punches 385
CENTRES Lathe 422
CHAIN HOISTS 162
CHAIN SLINGS 185
CHAIN Coil 184
Chandelier 343
Hand 168
Hooks 185
Load Binder 187

Page

Jack 343
Pipe Wrenches 367
Pipe Vices 370
Transmission 486
Twisted Link 343
CHALK 335
CHALK LINES 392
CHANDELIER CHAIN 343
CHANNEL STEEL 130
CHASER DIES 410
CHECK VALVES Ball 14
Bronze 9
Cast Iron & Cast Steel 11
Controllable Lift 12
"Duoseal" 10
Forged Steel 13
Piston 14
Renewable Disc 9
"Super" Bronze 10
"Validus" 10
CHEQUER PLATE 121
CHIPPING HAMMERS 383
CHISELS, Cold 384
Wood 390
CHROME PLATED BRASSWARE 55
CHROME VANADIUM SPANNERS 354
CHUCK KEYS 319
CHUCKS, Drill 319
Lathe 320
CIRCULAR WIRE BRUSHES 330
CISTERN COCKS 52
"CLAM" TRAPS 33
CLAMPS, Case 172
Drop Forged 372
Drum 173
Girder 172
"RENFROE" Plate 175
Sash 372
CLAW HAMMERS 382
CLEANING CLOTH 334
"CLIP" PATTERN GATE VALVES 20
CLIPS, HOSE OR PIPE 95
CLOTHING, PROTECTIVE 345
CLOUTS 255
COACH SCREWS 242
COAL TAR 346
COATED ABRASIVES 279
COCK FIBRE 221
COCKS, All Iron 25

INDEX

Page

COCKS, Ball 54
Bib 52
Blow-off 27
Bronze 26
Bubbler 53
Cast Iron 25
Chrome Plated 52
Cistern 52
Gauge 28
Gas 54
Hose 52
Main 53
Meter 52
Path 53
Pet 28
Petrol 79
Pillar 52
Pressure Gauge 28
Recess 52
Shower 52
Spring Action 53
Tank 54
Tube 54
Urn 54
COCONUT FIBRE 345
COKE 345
COIR MATS 334
COLD CHISELS 384
COLD SETS 386
COLLARS, SHAFT 457
COMBINATION SETS 439
COMBINED COCK & CHECK VALVES 27
COMPRESSED ASBESTOS JOINTING 223
COMWELD WELDING & CUTTING EQUIPMENT 132
"CONELOK" NUTS 239
CONTACT WHEELS Rubber 281
Felt 271
CONDENSER Cord 221
Tube 110
Tube Brushes 331
CONTROLLABLE LIFT CHECK VALVES
Bronze 10
Cast Iron & Cast Steel 12
Forged Steel 13
CONVEYOR EQUIPMENT 212
COPPER, Rivets 255
Sections 119
Sheets 118

Page

Tube 107
Wire 119
COPPER HAMMERS 383
CORE DRILLS 398
CORK Jointing 224
Sheet 227
CORRUGATED JOINT RINGS 227
COTTER PINS 254
COTTON Condenser Cord 221
Mops 334
Packing 221
Waste 334
COUNTERS 452
COUPLINGS, Air Hose 94
Shaft 472
Welding Hose 105
COWLEY LEVELS 393
CRAMPS 372
CRAYONS 335
CREOSOTE 346
"CROCKATT" Valve Reseaters 394
CROSS EXPANSION PISTON ROD PACKING 220
CROWBARS 386
CUP HEAD BOLTS & NUTS 235
CUP WASHERS 236
CUPS Grease and Oil 499
CUTTERS Angle 416
Bolt 368
Concave & Convex 417
Involute 418
Pipe 369
Side & Face 416
Slotting 414
Washer 385
Wire 364
Woodruff Key 417
CUTTING COMPOUND 346
CUTTING NOZZLES 137
CUT OFF MACHINES 317
CUT OFF WHEELS 263

D

DAMPCOURSE 350
DEADEYES 459
DEEP HOLE DRILLS 398
DEGREASANTS 334

INDEX

Page

DEMAGNETISERS 451
DEPTH GAUGES 438
DESOUTTER AIR TOOLS 510
DEUBLIN UNIONS 503
DEVCON PRODUCTS 347
DIAL INDICATORS 434
DIAMOND ABRASIVE WHEELS 272
DIAPHRAGM RUBBER 227
DIAPHRAGM VALVES 15
DIE Heads 407
Nuts 409
Sets 329
DIES 408
DIES AND STOCKS 409
DISC VALVES 5
DISCS, Abrasive 282
DISINFECTANT 334
DISTILLED WATER 345
DIVIDERS 441
"DIXON'S" Belt Dressing 463
Gasket Cement 226
Graphite 227
Pipe Jointing Compound 226
DOOR CLOSERS 340
DOWEL PINS 457
"DOWN-EE" FITTINGS 98
DREADNOUGHT VALVES 504
DRESSER-MALCO FITTINGS 40
DRESSERS, GRINDING WHEEL 271
DRESSING, BELT 463
DRILL Bits 397
Chucks 319
Drifts 401
Grinding Attachment 314
Jig Brushes 449
Sets 402
Sleeves 401
Sockets 401
Stands 402
DRILLS Bench 318
Brick 384
Breast 392
Centre 401
Deephole 398
Electric Portable 288
Hand 392
Jobbers 398
Letter 398
Long Series 398

Page

Masonry 403
Metric 399
Number 400
Pedestal 318
Short Series 400
Slot 419
Star 384
Straight Shank 399
Stub 400
Tapered Shank 397
Tungsten Tipped 403
Twist 397
Wire Gauge 398
DRILLS & COUNTER SINKS 401
DRUM CLAMPS 173
DRUM PUMPS 100
DRYSAL 334
DRYVINS 259
DUFOR BUSHES 460
"DUOSEAL" GLOBE STOP VALVES 6
DUPLEX SHEARS 305
DYMO EMBOSSING TAPES 335
DYNABOLTS 257

E

"EARGUARD" EQUIPMENT 158
EBONITE 227
ECLIPSE AUTO CENTRE PUNCH 441
ELASTIC STOCKS 407
EJECTORS 32
ELBOWS, Brass 60
Malleable Iron 38
Wrought Iron 42
ELECTRIC, Soldering Irons 394
Tools 288
ELECTRICAL TAPE 286
ELECTRODE HOLDERS 145
ELECTRODES WELDING 147
ELECTRO MAGNETIC DRILL STAND 290
ELEVATING TRUCKS 214
EMERY Cloth 280
Tape 280
Wheels 261
Wheel Dressers 271
END CUTTING NIPPERS 364
END MILLS 420
EVEREADY BATTERIES 345

INDEX

Page

EXPANDING Bits 391
Reamers 412
EXHAUST FANS 493
EXPANDET ANCHORS 257
EXTRACTOR Sets 403
EYE Bolts 180
Hooks 188
Shields 154
EZY-OUT TYPE EXTRACTORS 403

F

FACE MILLS 415
FACE SHIELDS 154
FANS 493
FASTENERS, BELT 463
FEEDERS, OIL 500
FEELER GAUGES 446
Gauge Stock 446
FEIN PORTABLE ELECTRIC TOOLS 310
FELT CONES 271
FENNER-DODGE EQUIPMENT 464
FERROPRO PAINTS 346
"FIBERLOC" ABRASIVES 263
FIBRE, Coconut 345
Red 227
FIBRO Cutters 393
Nails 255
FIGURE & LETTER PUNCHES 454
FILE Card 376
Handles 388
FILES 374
FILMFLEX 346
FILTER TOWELLING 345
FILTERS, AIR LINE 160
FIRE Bricks 351
Clay 351
FIRE FIGHTING FITTINGS 59
FIRM JOINT CALIPERS 441
FISH OIL 346
FITTINGS, Airline 92
Bathroom 52
Brass 60
Butt Welding 44
Capillary 62
Copper Sewerage 53
Flare 71
Grease 494

Page

Hose 95
Hot Water 60
Malleable Iron 38
Petrol 74
Pipe 38
P.V.C. 102
Sewerage 57
FLANGE TABLES 46
FLANGES 45
FLARE FITTINGS 71
FLARING TOOL 369
FLEXIBLE Couplings 473
Shaft Grinders 293
FLINT LIGHTER 144
FLINTS 144
FLUX "BAKER'S" Soldering 352
Brazing & Welding 142
FOOT VALVES & STRAINERS 101
FORGES 386
FORMINEX 346
FOUNDRY Brushes 334
Riddles 345
FRENCH CHALK 335
FUNNELS 500

G

GALVANISED Bolts & Nuts 234
Pipe 115
Sheet 124
GARBAGE BINS 334
GARDEN WHEELBARROWS 218
GAS SAVER 145
GAS VALVES 24
GASKET Cement 225
Rings 224
GATE VALVES, Bronze 18
Cast Iron & Cast Steel 20
Quick Action 19
GAUGE Glasses 225
Cocks 28
GAUGE GLASS Cutters 366
Mountings 28
Protectors 29
Rings 225
GAUGES, Acetylene 141
Air 37
Depth 438

INDEX

Page

- Dial 435
- Drill & Wire 447
- Feeler 446
- Oxygen 141
- Pressure 37
- Screw Pitch 447
- Screw Cutting 446
- Steam Pressure 37
- Taper Wire & Thickness 446
- Thickness & Feeler 446
- Thread 447
- Vacuum 37
- Water 29
- Wire 447

GAUNTLETS 345
GAUZE WIRE 119
G. CLAMPS 372
GEAR CUTTERS INVOLUTE 418
GEARED MOTORS 482
GEAR PUMPS 101
GEAR REDUCTION UNITS 479
GEARS 484
GIB HEAD KEYS 457
GIRDER Clamps 173
- Trolleys 174

GLAND COCKS, Bronze 28
- Cast Iron 25

GLASSES, Gauge & Lubricator 225
GLASS PAPER 280
GLOBE VALVES, Bronze 4
- Cast Iron & Cast Steel 7
- "Duoseal" 6
- Forged Steel 7
- Renewable Disc 6
- "Super" Bronze 5
- "Validus" 6

GLOVES 345
GLUE BRUSHES 334
GLUE 347
GLYCERINE 347
G.M.F. GRINDERS 314
GOGGLES 150
GRAPHITE 227
GRAPHITE Grease 346
- Jointing Compound 226

GRATES, Trapscrew 57
GRAVITY CONVEYORS 212
GREASE AND OIL Cups 499
- Guns 499

Page

GREASE Fittings 494
- Nipples 494

GREASE GUN ACCESSORIES 498
GREASES 346
GRINDERS, Electric Bench 314
- Pedestal 316
- Portable 291

GRINDING Discs 263
- Paste 271
- Wheels 261
- Wheel Dressers 271

GRIPS, WIRE ROPE 194
GROOVERS 386
GRUB SCREW KEYS 247
GRUB SCREWS 243
GROUND FLAT STOCK 422
GUNS, Air 94
- "ARNOLD DEVILBISS" Spray Finishing 159
- Flint 144
- Grease & Oil 499

GULLIES & RISERS 57
GULLY TRAPS 57
GUTTER BOLTS & NUTS 251
GUILOTINES 322

H

HACKSAW Blades 379
- Frames 379
- Machines 316

HAIR FELT 227
HAMMERLOCK 184
HAMMERS 382-383
HAND Brushes 334
- Chain 168
- Chasers 410
- Drills 392
- Forges 386
- Reamers 411
- Saws 391
- Taps 404
- Trucks 216
- Winches 169

HANDLES 388
HARDITE 346
HASPS & STAPLES 338
HATCHETS 387

INDEX

Page

HATS SAFETY 155
HEATERS STEAM WATER 33
HEAT RESISTANT PAINT 346
HEIGHT GAUGES 438
HELDON FITTINGS 68
HELMETS, WELDING 149
HEMP, DRY AND GREASY 221
HERC-ALLOY CHAIN 184
HESSIAN 345
HIGH FREQUENCY GRINDERS 312
HINGES 336
HOISTS CHAIN 164
HOLDERS Electrode 145
Lathe Tool 421
HOLE SAWS 328
"HOLZIT" HAND GRIPS 172
HONEYWELL CONTROL EQUIPMENT 513
HOOKS, CHAIN 188
HOSE Acetylene 105
Air 105
Canvas Fire 59
Clamps 95
Clips 95
Cocks, Fire 59
Fittings 96
Menders 96
Nuts & Tails 96
Nozzles 96
Oxygen 105
Plastic 104
Polythene 104
Sand & Shot Blast 104
Spray Painting 160
Steam 106
Suction 105
Tail Pieces 96
Water 106
Welding 105
HOT WATER FITTINGS 60
HYDRANT FITTINGS 59
HYDRAULIC Crane 197
Door Closers 340
Jacks 326
Pallet Truck 197
Pump Packing 220

Page

HYDROMETERS 228
HYDROSEAL 350

I

IDLERS, BACKSTAND 281
"IMEX" RIVETS 256
INDICATOR Cord Metallic 335
Paper 335
INDICATORS Dial 434
Speed 452
INGERSOL-RAND TOOLS 508
INJECTORS 32
INSERTION, RUBBER 227
INSIDE Calipers 441
Micrometers 437
INSULATING Board 227
Tape 226
INVOLUTE GEAR CUTTERS 418
IRON SHEET, Galvanised or Plain 124
IRONS, SOLDERING 394

J

JACK CHAIN 343
JACKS 326
JACOBS CHUCKS 319
JENNY CALIPERS 441
JOBBERS DRILLS 398
JOLT HEAD NAILS 255
JOINT RINGS, "TAYLORS" 227
JOINTING 223
JOINTING COMPOUNDS 225

K

KALSOMINE BRUSHES 334
KANGO ELECTRIC HAMMERS 313
KEMBLA COPPER TUBE 107
KEMBRONZE 121
KEROSENE 334
KEYS Gib Head 457
Grub Screw 247
Woodruff 457

INDEX

Page

KEY SEAT CLAMPS 440
KNURLING TOOLS 421

L

LADDERS 351
LADLES 394
LAGGING Asbestos 222
Hair Felt 227
LAMP Cotton 221
Scissors 389
LAPPING COMPOUND 271
LAPPING PLATES 449
LASHING & TWINE 191
LATHE Boring Bars 421
Centres 422
Chucks 320
Cut-Off Bits 421
Tool Bits 422
Tool Holders 421
LAUNDRY ARM 55
LEAD LADLES 394
LEAD Pipe 119
Sheet 118
Wire 119
LEATHER Aprons 345
Belting 463
Gauntlets & Gloves 345
LENSES Welding 149
LETTER Stamps 454
LEVELS 393
LEVELS PRECISION 449
LEVER HOISTS 170
LIFTING JACKS 326
LIGHT GLOBES 345
LIME 351
LINE LEVELS 393
LIQUID GLUE 347
LITCHFIELD EQUIPMENT 396
LITHARGE 347
LIVE CENTRES 342
LOAD BINDERS 187
LOAD SKATES 197
LOCKNUTS 238
LOCK WASHERS 236
LOCKS 340
LOW MELTING POINT ALLOYS 122
LOXINS 259

Page

LOXIN TOOLS 259
LUBRICATING Graphite 227
Grease 346
LUBRICATOR GLASSES 225
LUBRICATORS 500
LUMBER CRAYON 335

M

3M BRAND ADHESIVES 348
"MAASDAM" POW'R-PULL 171
MACHINE Taps 406
Reamers 411
Vices 373
MACHINE TOOL ACCESSORIES 423
MACKAY RUBBER MOUNTINGS 490
MAGNOLIA BEARING METAL 122
MAIN COCKS 53
MALCO PUMPS 100
MALLEABLE PIPE FITTINGS 38
MALLETS 382
MALTHOID 350
MANGANESITE 226
MAGNETIC TOOLS 450
MANILA ROPE 191
MARKAL PAINTSTIK 350
MARKOUT STAIN 335
MARLINE 191
MASH HAMMERS 383
MASKING TAPE 283
MASONRY, Anchors 257
Drills 403
MATS, Coir 334
MATTOCKS 387
MERCER DIAL GAUGES 434
METALLIC ASBESTOS Cloth 222
Tape 221
METALLIC H.P. JOINTING 223
METALLIC TAPES MEASURING 444
METAL THREAD SCREWS 251
METHYLATED SPIRITS 334
MICROFYNE GRAPHITE 227
MICROMETER DEPTH GAUGE 439
MICROMETERS 436
MICROSET REAMERS 412
MILD STEEL 124
MILL BOARD, ASBESTOS 222
MILLING CUTTERS 414

INDEX

Page

MINERAL TURPENTINE 334
MIXER, STEAM AND WATER 33
MOPS COTTON 334
MORSE TAPER Reamers 412
Sockets 401
MOUNTED POINTS 268
MULTIGRIPS 366

N

NAIL Pullers 386
Punches 385
NAILS 255
NEATSFOOT OIL 346
NEEDLE FILES 376
NEEDLE VALVES 4
NEOPRENE RUBBER 227
NETA HOSE FITTINGS 96
NIBBLERS 304
NIGHT LATCHES 341
NIPPERS & PLIERS 364
NOLOK 89
NON FERROUS METALS 108
NON RETURN VALVES 9
NORICENE 346
NOZZLES HOSE 96
NUMBERING HEADS 456
NUTS Acorn 239
Black 239
Brass 238
Bright 238
Castle 238
High Tensile 231
"Nyloc" 239
Steel Pressed 239
Stainless Steel 238
Wing 239
NUTS & TAILS 96
NYLON TUBE FITTINGS 82
NYLON TYRED WHEELS 198

O

O CLIPS 95
OIL & GREASE GUNS 499

Page

OIL Cans 500
Cups 500
Drum Pumps 100
Feeders 500
Fillers 500
Funnels 500
Jointing 223
Jointing Compound 225
Measures 500
Stones 274
Syringes 500
OILERS SIGHT FEED 500
OILS 346
OIL RESISTING PACKINGS & JOINTINGS 223
ORBITAL SANDERS 291
OUTSIDE Calipers 441
Micrometers 436
OXY ACETYLENE WELDING & CUTTING EQUIPMENT 142

P

PABCO PRODUCTS 350
PACKING Knives 390
Screws 220
PACKINGS, for all applications 220
PAD BOLTS 339
PADLOCKS 340
PAINT Brushes 334
Spray Finishing Equipment 159
Scrapers 389
PALLET TRUCK 197
PANEL PINS 255
PARALLEL SLIDE VALVES Cast Iron, Cast Steel
Forged Steel 22
PARTING OFF TOOLS 421
PENETRATING OIL 346
PERA MACHINE REAMERS 413
PERMACEL THREAD SEALER 226
PERMANENT MAGNETS 451
"PERMANITE" JOINTING 223
PET COCKS 28
PETROL Cocks 79
Fittings 74
PETROLEUM JELLY 346
PHENOL 334
PHOSPHOR BRONZE Sheet 118
"KEMBRONZE" 121

INDEX

Page

PHOSPHOR BRONZE Wire 119
PIANO TROLLEY 217
PICK HANDLES 388
PICKS 387
PINCERS 364
PINCH BARS 386
PIN Punches 385
Vices 440
PINS, Cotter 254
Taper 457
PIPE, A.P.I. 114
Copper 107
Galvanised 115
Lead 119
Steam 115
PIPE Benders 224
Cutters 367
Fittings 38
Flaring Tool 369
Hanging Clip 95
Hooks 95
Jointing Compound 225
Rail Fittings 98
Saddles 95
Screwing Machines 323
Stocks & Dies 407
Vices 370
Wrenches 367
PLAIN Mills 414
PLANES, Carpenters 370
PLASTIC Drill Stands 402
Hose Fittings 92
Metal 347
Wood 347
PLATE CLAMPS 175
PLIERS & NIPPERS 364
PLATFORM TRUCKS 215
PLIOBOND 347
PLUG COCKS, Bronze 26
Cast Iron 25
PLUGS AND WASHERS 57
PLUMB-BOBS 392
PLUMBERS Tools 367
Hemp 221
PLUMMER BLOCKS 459
PODGER SPANNERS 353
POLISH, Brasso 334
"POP" RIVETS 256
PORTABLE ELECTRIC TOOLS 288

Page

POWER PLUS GASKET GOO 226
PRIOR MARKING DEVICES 454
PRECISION MEASURING TOOLS 436
PRESSED NUTS 239
PRESSURE GAUGES 37
PRESSURE REDUCING VALVES 36
PROTRACTORS 439
PROTECTIVE CLOTHING 345
PULLEYS 462
PULLEY BLOCKS 192
PUMP PACKING 220
PUMPS 100
PUNCHES, Belt 285
Centre 385
Letter & Figure 454
Nail 385
Pin 385
Roofing 384
Wad 385
PUTTY 347
PUTTY KNIFE 389
P.V.C. PIPE & FITTINGS 103

Q

QUERSA CHASING MACHINE 301
QUICK ACTION GATE VALVES 21

R

RADICON SPEED REDUCERS 479
RADIUS GAUGE 446
RAINWEAR 345
RASPS & FILES 375
RATCHET, PIPE STOCK & DIE SETS 407
RAWHIDE HAMMERS & REFILLS 382
RAWL BRAND MASONRY ANCHORS 358
REAMERS 411
RED Fibre 227
Lead 346
REDUCING VALVES 36
REFRIGERATION FITTINGS 71
REFRIGERATION TUBE 109
REGULATORS "COMWELD" 141
RELIEF VALVES, Bronze 30
Cast Iron & Cast Steel 31
RENEWABLE DISC VALVES 5

INDEX

Page

RENFROE CLAMPS 173
RESEATERS FOR VALVES 394
RESIN 347
RESIN CORED SOLDER 352
RESPIRATORS 156
RIDDLES 345
RING SPANNERS 355
RIVET TONGS & SETS 386
RIVETS 255
ROCK TOOLS 384
ROCKWELL-PORTER CABLE PORTABLE ELECTRIC TOOLS 294
ROD SAW 376
ROLLED STEEL SECTIONS 128
ROLLER CHAIN 486
ROLLER GRAVITY CONVEYORS 212
ROOFING Nails 255
- Punches 384
- Screws 254
- Squares 392

ROPE Asbestos 222
- Manila & Sisal 191

ROPE Blocks 192
- Grips Wire 194
- Slings, Wire 193
- Sockets 194
- Thimbles 195

ROTARY FILES & BURRS 377
RUBBER & CANVAS PACKING 220
RUBBER, Cord 227
- Hose 104
- Insertion 227
- Neoprene 227
- Port Strip 227
- Sheet 227
- Solution 348
- Valves 15
- Vee Belts 464
- Mallets 382
- Wheels 199

RULES 442

S

S.F. HOOKS 189
S.R.D.B. COUPLINGS 474
SAFETY Hats 155
- Goggles 150

Page

- Spectacles 153
- Valves, Spring Loaded Bronze 30
- Valves, Cast Iron & Cast Steel 31

SAFETY WALK NON SLIP SURFACING 282
SALINOMETERS 228
SAMSON TRUCKS 219
SAND 351
SAND & SHOT BLAST HOSE 104
SANDING Belts 280
- Discs 282
- Machines, Portable 291

SASH Cramps 372
- Cord 191
- Tools 334

SAWDUST 345
SAW SETS 391
SAWS, Hack 379
- Hand 391
- Metal Cutting 379
- Portable Electric 292
- Rip 391
- Slitting 419
- Sheet 379
- Tenon 391

SCALING GUN Needle 301
SCALING HAMMERS 383
SCISSORS 389
"SCOTCH" Industrial Tapes 283
- Electrical Products 286

SCRAPERS 389
SCREWDRIVERS, Electric 293
- Hand 380

SCREWDRIVER KIT 381
SCREW Augers 391
- Extractors 403
- Jacks 327
- Pitch Gauges 447
- Slot Cutters 418

SCREW CUTTING GAUGE 446
SCREWING OIL 346
SCREW PITCH GAUGE 447
SCREWS, Allen Head 243
- Cheese Head 251
- Coach 242
- Countersunk 251
- Grub 243
- Metal Thread 251
- Packing 220
- Roofing 254

INDEX

Page

- Round Head 251
- Self Tapping 252
- Set 232
- Socket Head 243
- Wood 254

SCRIBERS 441
"SCRUINS" 259
SCUTCH TOOLS 384
SERALOCK FACING CUTTERS 418
SELF DRILLING SCREWS 253
SELF GRIP WRENCHES 366
SELF TAPPING SCREWS 252
"SEL-LOK" SPRING PINS 250
SEMI ROTARY PUMPS 100
SET SCREWS 232
SEWERAGE FITTINGS 57
SHACKLES 181
SHAFT BEARINGS 458
SHAFT COLLARS 457
SHAFT COUPLINGS 473
SHARPENING STONES 274
SHAVE HOOKS 389
SHEARS, Portable Electric 300
- Timmens Hand 369

SHEET Aluminium 118
- Brass & Copper 118
- Galvanised 124
- Jointing 223
- Lead 118
- Steel 124
- Zincanneal 124

SHEET SAWS 379
SHELLAC 347
SHELL End Mills 415
- Reamers 414

"SHEPHERD" CASTERS 209
SHIFTING SPANNERS 353
SHIM Brass 118
- Steel 118

SHOVEL HANDLES 388
SHOVELS 387
SHOWER Arms 55
- Cocks 52
- Heads 55

SHURE SET ANCHORS 260
SIDE & FACE CUTTERS 416
SINTALITE BRONZE BUSHES 461
SILVER Brazing Alloy 142
- Steel 422

Page

SISAL ROPE 191
SKIL-SHER PORTABLE ELECTRIC TOOLS 306
SLINGS Case 172
- Chain 185
- Drum 173
- Web-belt 191
- Wire Rope 193

SLOT DRILLS 419
SLOTTING CUTTERS 418
SLUICE VALVES 26
SNIFTING VALVES 26
SNIPS, Tinmens 369
SOAPS 334
SOCKET Head Screws 243
- Reamers 412
- Spanners 356

SOCKET DRILL 401
SOFT SOAP 334
SOLDER 352
"SOLDERINE" FLUX 352
SOLDERING Fluid 352
- Irons 394
- Paste 352

SOLDERLINE FITTINGS 62
SOUNDING TAPES 444
SPANNER SETS 355
SPANNERS 353
SPEED INDICATORS 452
SPEED REDUCERS 472
SPIRIT LEVELS 393
SPRAY PAINTING EQUIPMENT 159
SPRING CALIPER DIVIDERS 441
SPRING LOADED SAFETY VALVES 30
SPUD BARS 386
SPUNCAST PHOSPHOR BRONZE 121
SQUARES, Carpenters 392
- Combination 439
- Engineers 440

"STAG" PIPE JOINTING COMPOUND 225
STAHL ELEKTUS HOISTS 162
STAINLESS STEEL Bar 117
- Bolts 230
- Fittings 90
- Nuts 238
- Screws 251
- Soldering Fluid 352
- Valves 4
- Washers 236

INDEX

Page

STANDS, Drill 290
STAPLES 255
STAR DRILLS 384
STEAM Cocks 28
Fittings 42
Gauges 225
Hose 106
Jointing 223
Packing 220
Pipe 115
Traps 33
Unions 41
STEAM & WATER MIXER 33
STEEL Bars 125
Clamps 175
Gears 484
Parallels 448
Pipe Fittings 42
Plate 131
Rules 442
Sections 125
Sheets 124
Silver 422
Squares 125
Tool 422
Tube 111
Unions 41
Wire Rope 196
Wool 334
STILLSON TYPE WRENCHES 367
STOCKINETTE 334
STOCKS & DIES 407
STOCK & DIE SETS 409
STONES SHARPENING 274
STOP COCKS, Bronze 26
Cast Iron 25
STRAIGHT EDGES 440
STRAINERS 34
STRAINING SCREWS 190
STRAP HINGES 338
STRING 191
STROKE COUNTERS 452
STRUCTURAL BOLTS 231
STUB DRILLS 399
STUD ANCHORS 258
STUD EXTRACTORS 396
STUDS, ENGINEERS 241
SUCTION HOSE 105
"SUPERITE" STEAM JOINTING 223

Page

"SUPEROID" OIL JOINTING 224
SUPPLIED AIR EQUIPMENT 157
SURFACE GAUGES 441
SURFACE PLATES 449
SURFORM FILES 376
SWAB BRUSHES 334
SWING CHECK VALVES, Bronze 9
SWIVEL SPOUTS 55
SYRINGES OIL 500

T

TACHOMETERS 452
TACKS 255
TAIL PIECES, HOSE 96
"TAMPINS" & TAMPIN TOOLS 258
TANK Cocks 54
Gauges & Water Gauge Mounts 28
TAP AND DRILL GAUGE 447
TAP AND DRILL SETS 402
TAPE, Abrasive 200
Asbestos 221
Insulation 226
Masking 283
TAP EXTRACTORS 424
TAPER-LOCK BUSHES 465
TAPER Pins 457
Pin Reamers 412
Shank Drills 397
TAPES, Measuring 444
Pressure sensitive 283
TAPE DISPENSERS 284
TAP TITE 253
TAP WRENCHES 407
TAPS, B.S.P. Gas 404
Conduit 404
Hand 404
Machine 405
TAR BRUSHES 334
TAYLOR RINGS 227
TECALEMIT EQUIPMENT 494
TEE BOLTS 249
TENON SAWS 391
TENSION WRENCHES 363
T. HINGES 338
THERMOMETERS 228
THERMOMETER CASES 228
THIMBLES ROPE 195

INDEX

Page

THREAD Chasers 410
Dies 408
Gauges 447
Taps 404
THREE-M-ITE ABRASIVES 279
THRUSTOR BRAKES 477
TIMING BELT DRIVES 471
TIN INGOTS 120
TINMENS Rivets 255
Snips 369
TOGGLE BOLTS 258
TOGGLE CLAMPS 453
TONGS 386
TOOL Bits 422
Boxes 395
Chests 360
Handles 388
Holder 422
Post Grinders 316
Steel 422
TOOLMAKERS CLAMPS 440
TOOLMAKERS TOOLS 439
TORCHES 345
TORQUE WRENCHES 363
TORQUE WRENCH METERS 363
TOWELLING FOR FILTERS 345
TRAMMELS 441
TRANSMISSION EQUIPMENT 457
TRAP SCREWS & GRATES 57
TRAPS, STEAM 33
TREACLE GATE 25
TREFNER DRUM SANDERS 281
TRESSELS 351
TRI-M-ITE ABRASIVES 279
TROLLEYS, BEAM 173
TROWELS 393
TRUCK CASTERS 198
TRY SQUARES 392
TUBE, Brass 110
Condenser 110
Copper 107
P.V.C. 102
R.H.S. 131
Steel 111
Wrought Iron 115
TUBE BRUSHES 331
TUBE EXPANDERS 501
TURNBUCKLES 190
TURPS, MINERAL 334

Page

TWADDELL'S HYDROMETER 228
TWINE 191
TWIST DRILLS 397
TURNER BANJO REPLACEMENTS 86
TURNER NYLON TUBE FITTINGS 82
TURNER PRECISION FITTINGS 74
TURNER TURNLOCK FITTINGS 88
TURNER TURNOTS FITTINGS 84

U

UNBRAKO SCREWS 243
UNIONS, Brass Hot Water 60
Bronze 29
Petrol 74
Rotating 503
Solder-on and Solderless 77
Steam 41
UNIVERSAL BEAMS 129

V

VACUUM CLEANERS 300
VACUUM GAUGES 37
"VALIDUS" Globe Stop Valves 6
Check Valves 10
VALVES 1-36
VALVE RESEATER 394
VALVE TWIST 220
VARIABLE SPEED DRIVES 482
VARNISH BRUSHES 334
VASELINE 346
VEE Belts 464
Belt Pulleys 462
Blocks 448
VERSA MILL 420
VERTICAL CHECK VALVES, Bronze 9
Cast Iron & Cast Steel 11
VIBRATION DAMPENER 492
VICES, Bench 371
Machine 373
Offset 371
Pin 440
Pipe 370
Quick Action 371
Woodworkers 371

INDEX

Page

VINIDEX TUBE & FITTINGS 102
VISORS WELDING 149

W

W. D. 40 346
WAD PUNCHES 385
WALL DOMES 56
WASHERS 236
WASHING SODA 334
WASTE, COTTON 334
WASTES, FLOOR 57
WATER, Distilled 228
Gauge Glasses 225
Gauge Mounting Bronze 28
Gauge Protectors 29
Heaters Steam 33
WEB BELT LIFTING SLINGS 191
WEBBING, ASBESTOS 221
WEDGELINK VEE BELT 463
WEDGEROPES 464
WELDING Accessories 144
Electrodes 147
Fluxes 142
Goggles 150
Helmets 149
Rods 142
Sets 132
WELDOLETS 502
WHALE OIL 346
WHEEL BARROWS 218
WHEEL DRESSERS 271
WHEEL PULLERS 396
WHEELED GRAVITY CONVEYORS 213
WHEELS, Caster 199
Grinding 261
WHISTLES 345
WHISTLE VALVES 28
WHITE METAL 122
WICKSTEED TUBE EXPANDERS 501
WINCHES, Hand 169
Swing Stage 171
WING NUTS 239
WIPING Metal 352
WIRE, Black Tie 130
Bronze Non-Ferrous 119
Lead 119
Welding 142

Page

WIRE Brushes 330
Cutters 364
Gauges 447
Rope 196
Rope Grips 194
Rope Slings 193
Rope Sockets 194
Rope Thimbles 195
Strippers 366
WIRE ROPE OIL 346
WOLF PORTABLE ELECTRIC TOOLS 288
WOODRUFF Cutters 417
Keys 457
WOOD CHISELS 390
WOODFAST MACHINES 318
WOOD SCREWS 254
WOODEN MALLETS 382
WOODWORKERS VICES 371
WORM GEAR REDUCERS 480
WRECKING BARS 386
WRENCHES, Adjustable 353
Box Type 362
Chain Pipe 367
Crescent Type 353
Double Ended 353
Open Jaw 353
Pipe 367
Ratchet 356
Ring 355
Self Grip 366
Socket Screw 247
Stillson Type 367
Torque 365
Tubular 362
WROUGHT IRON Fittings 98
Pipes 115

Y

YARN, ASBESTOS 222
YORKSHIRE and YORKWAY FITTINGS 62
Y TYPE STRAINERS 34

Z

ZERK NIPPLES 494
ZINCANNEAL SHEET 120
ZINC BLOCKS 124

VALVE FIGURE NUMBERS INDEX

Figure	Page
1	4
1A	4
1AN	4
1M	4
1N	4
2	4
2A	4
3	26
3A	26
4	9
4A	9
4AF	9
4AP	9
4B	9
4BF	9
4D	9
4M	9
5	9
9A	29
10	29
15	28
16	28
17	28
18	28
19	28
19A	28
20	28
20A	28
27	30
28	30
29	26
31	27
32	27
36	26
37	26
39	29
41	29
42	29
49	29
52	27
52A	27
56	26
56A	26
59	18
59L	18
59M	18
59QA	19
60	18
60M	18
62N	5
64N	5
65N	10
66N	10
67	30
68	30
69	30
70	26
73	28
73A	28
74	31
74N	31
75	31
75N	31
84	28
85	28
101	5
102	5
103	5
104	5
121	9
122	9
145	29
146	29
147	29
148	29
159	19
160	19
201	7
201A	7
203	7
203A	7
245	7
312	27
313	27
314	27
315	27
315HP	27
315S	27
315SH	27
315SM	27
316	22
316HP	22
316HPV	22
316M	22
316S	22
316SH	22
316SM	22
316-10	22
350	12
351	12
352	12
400	11
400A	11
401	12
401A	12
402	11
402A	11
403	12
403A	12
404	11
404S	11
405	11
406	11
410	11
410A	11
412	11
412A	11
415	14
416	14
496C1	25
501	6
502	6
503	6
511	6
512	6
513	6
515C1	25
517C1	25
521	10
522	10
523	10
523C1	25
525C1	25
531	10
532	10
533	10
541	10
542	10
543	10
551	10
552	10
590A	20
600	20
600A1	20
600S	20
600L	20
601	20
601A1	20
601S	20
602	20
602S	20
604	24
604H	24
605	20
610	21
613	21
615	21
620	21
623	21
625	21
630	21
633	21
635	21
650N	10
660N	10
680	31
680S	31
681	31
681S	31
723	30
810	24
811	24
900	7
906	13
910	13
941	23
1001	23
1001BW	23
1501	6
1502	6
1511	6
1512	6
1521	10
1522	10
1900	8
1900BW	8
1906	13
1906BW	13
1910	13
1910BW	13
2001	23
2001BW	23
3001	15
3002	15
7080SA	22
7080SB	22
7080W	22
7081SA	8
7081SB	8
7081W	8
7483SA	14
7483SB	14
7483W	14
7484SA	14
7484SB	14
7484W	14
7883SA	14
7883SB	14
7883W	14
7884SA	14
7884SB	14
7884W	14
7910SA	19
7910SB	19
FA222	28
FA240	28
BC891	4
BC791	4
GF510	25
CC794	12
CC894	12

VALVE CLASSIFICATION

MAX. WORKING PRESSURE P.S.I. Steam	MAX. WORKING PRESSURE P.S.I. W.O.G.	MAX. TEMP. °FAH.	MATERIAL	DESCRIPTION	FIGURE NUMBER	PAGE
GLOBE STOP VALVES						
150	250	400	BRONZE	MEDIUM	1M	4
150	300	400	CAST IRON	STANDARD	201, 201A	7
200	300	400	BRONZE	STANDARD	1, 1A	4
200	250	400	BRONZE	STANDARD	2, 2A	4
200	300	400	BRONZE	NEEDLE	1N, 1AN	4
200	350	400	BRONZE	"RENEWABLE DISK"	101, 103	5
200	250	400	BRONZE	"RENEWABLE DISK"	102, 104	5
250	400	500	BRONZE	"SUPER"	62N, 64N	5
250	500	800	CAST STEEL	STANDARD	203, 203A	7
250	400	500	BRONZE	"VALIDUS"	502, 512	6
300	500	550	BRONZE	"VALIDUS"	501, 511, 503, 513	6
350	600	550	BRONZE	"DUOSEAL"	1501, 1511	6
350	550	500	BRONZE	"DUOSEAL"	1502, 1512	6
450	900	800	CAST STEEL	MEDIUM	245	7
800	2000	850	FORGED STEEL	BOLTED BONNET	7081SA-SB-W	8
900	1800	800	FORGED STEEL	STANDARD	900	7
1400	2800	900	FORGED STEEL	STANDARD	1900, 1900BW	8
—	3000	—	STAINLESS STEEL	NEEDLE	BC791, BC891	4
CHECK VALVES						
—	50	—	BRONZE	VERTICAL, PETROL AND OIL	4AP	9
150	250	400	BRONZE	MEDIUM	4M	9
150	300	400	CAST IRON	NON-HAMMER AND BLED STEAM	400, 410, 400A, 410A	11
150	300	400	CAST IRON	VERTICAL	405	11
150	300	400	CAST IRON	CONTROLLABLE LIFT	401, 401A	12
150*	—	—	CAST IRON	ACCESSIBLE FEED	351	12
—	150†	—	BRONZE	SWING	4B	9
—	175†	—	CAST IRON	SWING (above 12" size)	404	11
—	200†	—	CAST IRON	SWING (up to 12" size)	404	11
200	300	400	BRONZE	STANDARD	4, 4A	9
200	250	400	BRONZE	STANDARD	5	9
200	250	400	BRONZE	STANDARD	4AF	9
200	350	400	BRONZE	"RENEWABLE DISK"	121	9
200	250	400	BRONZE	"RENEWABLE DISK"	122	9
250	400	500	BRONZE	"SUPER"	65N, 66N	10
250	400	500	BRONZE	"SUPER" CONTROLLABLE LIFT	650N, 660N	10
250	500	800	CAST STEEL	NON-HAMMER AND BLED STEAM	402, 412	11
250	500	800	CAST STEEL	NON-HAMMER AND BLED STEAM	402A, 412A	11
—	300†	—	CAST STEEL	SWING	404S	11
250	500	800	CAST STEEL	"VERTICAL"	406	11
250	500	800	CAST STEEL	CONTROLLABLE LIFT	403, 403A	12
—	250*	—	CAST IRON	TILTING DISK	415	14
250	400	500	BRONZE	"VALIDUS"	522, 532, 542	10
300	500	550	BRONZE	"VALIDUS"	521, 523	10
300	500	550	BRONZE	"VALIDUS" CONTROLLABLE LIFT	531, 541, 533, 543	10
—	300	—	BRONZE	"VALIDUS" AIR CHECK	551, 552	10
350	600	550	BRONZE	"DUOSEAL"	1521	10
350	550	500	BRONZE	"DUOSEAL"	1522	10
—	350†	—	CAST STEEL	TILTING DISK	416	14
800	2000	850	FORGED STEEL	PISTON, UNION BONNET	7484SA-SB-W	14
800	2000	850	FORGED STEEL	PISTON, BOLTED BONNET	7884SA-SB-W	14
800	2000	850	FORGED STEEL	BALL, UNION BONNET	7483SA-SB-W	14
800	2000	850	FORGED STEEL	BALL, BOLTED BONNET	7883SA-SB-W	14
900	1800	800	FORGED STEEL	NON-HAMMER	906, 910	13
1400	2800	900	FORGED STEEL	NON-HAMMER	1906, 1906BW, 1910, 1910BW	13
RELIEF VALVES						
150	—	500	BRONZE	SPRING RELIEF, OPEN LANTERN	67	30
150	—	500	BRONZE	SPRING RELIEF, ENCLOSED OUTLET	68	30
150	—	500	BRONZE	SPRING RELIEF, OPEN SPRING	69	30
150	—	400	CAST IRON	SPRING RELIEF	680, 681	31
—	250	—	BRONZE	AIR RELIEF	723	30
250	—	500	BRONZE	SPRING RELIEF	74, 75	31
250	—	750	CAST STEEL	SPRING RELIEF	680S, 681S	31
SAFETY VALVES						
150	—	500	BRONZE	SPRING LOADED	27, 28	30

All working pressures given comply with the current applicable standards.

† Maximum Hydraulic Working Pressure.
* Maximum Working Pressure of Boiler.

‡ Pressures given are for Carb. Steel Valves. Alloy Steel ratings on application.

VALVE CLASSIFICATION

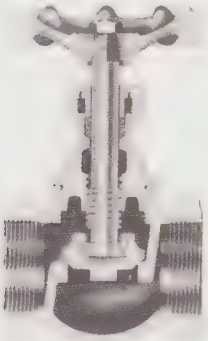
MAX. WORKING PRESSURE P.S.I. Steam	W.O.G.	MAX. TEMP °FAH.	MATERIAL	DESCRIPTION	FIGURE NUMBER	PAGE
GATE VALVES						
—	150†	—	BRONZE	LIGHT PATTERN	59E	18
—	150†	—	BRASS	LIGHT, HOT-PRESSED	59L	18
—	150†	—	BRONZE	QUICK ACTION	59QA	19
—	175†	—	BRONZE	MEDIUM	60M	18
—	175†	—	CAST IRON	INSIDE SCREW	600L	20
—	200†	—	CAST IRON	INSIDE SCREW	602, 600, 600A1, 601, 601A1	20
—	200†	—	CAST IRON	SPIGOT ENDS (up to 12" size)	605	20
—	250†	—	BRONZE	MEDIUM	59M	18
150	225	336	CAST IRON	"CLIP" PATTERN	590A	20
—	250†	—	BRONZE	STANDARD	60	18
—	100	—	BRONZE	STANDARD	59	18
—	250†	—	BRONZE	STANDARD, OUTSIDE SCREW	160	19
—	100	—	BRONZE	STANDARD, OUTSIDE SCREW	159	19
150	100	336	BRONZE	INSIDE SCREW	7910	19
—	100†	—	CAST STEEL	INSIDE SCREW	600S, 602S, 601S	20
400	2000	850	FORGED STEEL	COMPACT, OUTSIDE SCREW STEM	7080SA-SB-W	22
SLUICE VALVES						
400 ft. Head Test			CAST IRON	CLASS 1, B.S. 1218	610, 613, 615	21
800 ft. Head Test			CAST IRON	CLASS 2, B.S. 1218	620, 623, 625	21
1200 ft. Head Test			CAST IRON	EXTRA HEAVY	630, 633, 635	21
PARALLEL SLIDE VALVES						
150	300	400	CAST IRON	STANDARD	316	22
150	500	400	CAST IRON	STANDARD	316M	22
150*	—	500	BRONZE	STANDARD, BLOW-OFF	315	27
150*	—	550	CAST STEEL	STANDARD, BLOW-OFF	315S	27
150*	—	800	CAST STEEL	STANDARD, BLOW-OFF	315SM	27
150	700	800	CAST STEEL	STANDARD	316SM	22
150	700	800	FORGED STEEL	STANDARD, Table "J" Flanges‡	1001	23
150	500	650	CAST STEEL	STANDARD	316S	22
400	900	800	FORGED STEEL	MEDIUM, Table "K" Flanges	941	23
400	900	800	FORGED STEEL	STANDARD, Table "K" Flanges‡	1001	23
400*	—	800	CAST STEEL	STANDARD, BLOW-OFF	315SH	27
400	900	800	CAST STEEL	STANDARD	316SH	22
400	1200	800	CAST STEEL	STANDARD BLOW-OFF, Table "R" Flanges	315HP	27
400	1200	800	CAST STEEL	STANDARD, Table "R" Flanges‡	316HP-HPV	22
400	1200	800	FORGED STEEL	STANDARD, Table "R" Flanges	1001, 1001BW	23
900	1800	800	CAST STEEL	STANDARD BLOW-OFF, Table "S" Flanges	315HP	27
900	1800	800	FORGED STEEL	STANDARD, Table "S" Flanges‡	1001, 1001BW	23
900	1800	800	CAST STEEL	STANDARD, Table "S" Flanges	316HP-HPV	22
1400	2800	800	CAST STEEL	STANDARD, Table "T" Flanges	316HP	22
1400	2800	800	CAST STEEL	PRESSURE HELD	316-10	22
1400	2800	800	FORGED STEEL	STANDARD (Carbon steel)	2001, 2001BW	23
GAS VALVES						
—	20	—	CAST IRON	VERTICAL	810	24
—	20	—	CAST IRON	HORIZONTAL	811	24
WATER GAUGES AND PROTECTORS						
80*	—	—	BRONZE	ROUND BARREL SCREWED	42	29
150*	—	—	BRONZE	PACKED GLAND	39	29
300*	—	—	BRONZE	STANDARD, SLEEVE PACKED	145, 146	29
300*	—	—	BRONZE	MASSIVE, SLEEVE PACKED	147, 148	29
COCKS						
100*	—	340	BRONZE	PETROL, ROUND BARREL	15, 16	28
100*	—	340	BRONZE	PETROL, ROUND BARREL	17, 18	28
100*	—	365	BRONZE	PRESSURE GAUGE, ROUND BARREL	73, 73A	28
100*	—	365	BRONZE	PETROL, PACKED GLAND	19, 19A	28
100*	—	365	BRONZE	PETROL, PACKED GLAND	20, 20A	28
100	200	400	BRONZE	DEEP BARREL PLUG	3, 3A	26
100	200	400	BRONZE	PACKED GLAND, SCREWED	36, 37	26
100	200	400	BRONZE	PACKED GLAND, FLANGED	29	26
100	200	400	BRONZE	3-WAY PACKED, GLAND SCREWED	56, 56A	26
100*	—	—	BRONZE	BLOW-OFF, PACKED GLAND	31, 32	27
100*	—	—	BRONZE	BOILER FEED, COCK AND CHECK	52, 52A	27
100*	—	—	BRONZE	STANDARD SLEEVE PACKED STRAIGHT WITH UNION	84	28
100*	—	—	BRONZE	MASSIVE, SLEEVE PACKED STRAIGHT WITH UNION	85	28
100*	—	—	BRONZE	BLOW-OFF, ASBESTOS PACKED	312, 313, 314	27

GLOBE VALVES — BRONZE NEEDLE VALVES — BRONZE

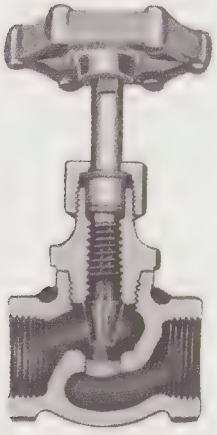
For Saturated Steam, Water, Air and Oil

SPECIFICATION

Fig. 1, 1A, 1M, 2, 2A, IN, IAN *Bronze Body, Cover, Spindle & Valve*



SECTIONAL VIEW
Fig. No. 1M



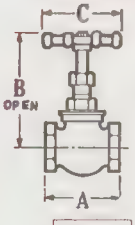
SECTIONAL VIEW
Fig. No. 1N

Fitted with rising spindles. They are particularly suitable for throttling purposes.

MAXIMUM WORKING PRESSURES

STEAM. Max. Temp. 400° Fah.	WATER, OIL, GAS
Std. Screwed. 200 lbs. per sq. in.	Std. Screwed. 300 lbs. per sq. in.
Std. Flanged. 200 lbs. per sq. in.	Std. Flanged. 250 lbs. per sq. in.
Medium. 150 lbs. per sq. in.	Medium. 250 lbs. per sq. in.
Needle. 200 lbs. per sq. in.	Needle. 300 lbs. per sq. in.

MEDIUM SCREWED*



IM

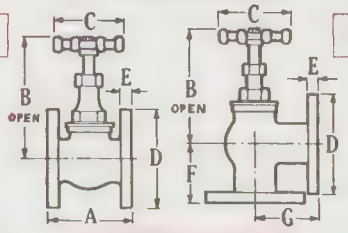
DIMENSIONS INCHES

Size	A	B	C
½	2⅛	3½	1⅞
¾	2⅝	4¼	2½
1	2⅞	5	2⅞
1¼	3¼	5¼	3⅜
1½	3⅝	5¾	3⅝
2	4½	6¼	4⅛
2½	5½	7⅝	4⅝
3	6½	8	5½

STANDARD FLANGED†

Globe Stop Valves

2 2A



DIMENSIONS INCHES

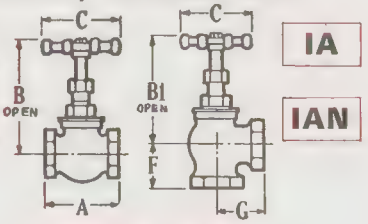
Size	A	B	B1	C	D	E	F	G
½	2¾	3⅞	4⅛	2½	3¾	⅜	2⅜	2⅜
¾	3⅛	5⅛	4⅝	2⅞	4	⅜	2½	2½
1	3½	5¾	6	3⅜	4¾	⅜	2⅞	2¾
1¼	3½	6	6½	3⅝	5¼	½	3 3/16	3 3/16
1½	4⅛	6¼	7⅛	4⅛	5½	½	3⅜	3½
2	4⅞	8	7¾	4⅝	6½	⅝	4⅛	4
2½	6½	9¼	8¾	6	7¼	⅝	4⅝	4⅜
3	7⅜	10⅜	10⅜	7	8	⅝	5⅛	5
4	8	9¾	11½	7	9	¾	5¾	5¼

*Screwed B.S.P. Thread.
†B.S. Table "F" Flanges and working conditions.

STANDARD SCREWED*

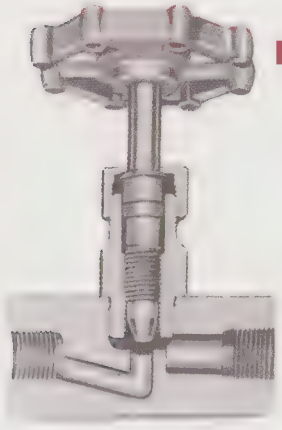
Globe Stop and Needle Valves

I IA IN IAN



DIMENSIONS INCHES

Size	A	B	B1	C	F	G
¼	1¾	2⅞	2⅞	1⅞	1	1
⅜	2	3⅛	3¼	1⅞	1	1
½	2¼	3⅞	4⅜	2½	1½	1½
¾	2⅝	5⅛	4⅝	2⅞	1⅞	1⅞
1	3¼	5¾	5¼	3⅜	2⅛	2
1¼	3⅝	6	5⅞	3⅝	2⅛	2
1½	4⅛	6¼	6¾	4⅛	2¾	2⅜
2	5¼	8	7¾	4⅝	3¼	2⅝
2½	6	9¼	8¾	6	4⅛	3½
3	7⅜	10⅜	10⅜	7	4⅞	4¼
4	8	11½	11½	7	5⅜	4¼



NEEDLE VALVES — STAINLESS STEEL — STEEL

For High Pressure Steam, Water, Oil and Chemicals

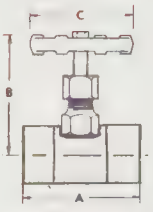
SPECIFICATION

FIG. BC891 *All Parts Stainless Steel*
BC791 *All Parts Carbon Steel*

Designed for Close regulation of flow, on High Pressure Steam Installations up to 800°F. High Pressure Hydraulic Installations requiring the metering control of a needle valve, and chemical services where a stainless steel valve is essential.

MAXIMUM WORKING PRESSURE

Steam 300 lbs. per sq. in. up to 420°F.
Hydraulic 3000 lbs. per sq. in.



DIMENSIONS INCHES

Size	A	B	C
¼	2	3 3/16	1⅞
⅜	2	3 3/16	1⅞
½	3¼	4½	3½
¾	3¼	4½	3½
1	4¾	8¼	6

BC 891 STAINLESS STEEL

BC 791 CARBON STEEL

Available in angle pattern.

GLOBE VALVES, RENEWABLE DISC TYPE — BRONZE

For Saturated Steam, Water, Air and Oil

SPECIFICATION

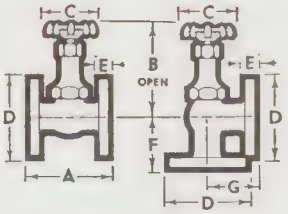
FIG. 101, 103. 102, 104. *Bronze Body, Cover and Spindle, Composition Disc*

SECTIONAL VIEW
Fig. No. 101

For use in Heating, Hot Water and Air installations, Hospital and Kitchen equipment, also for medium and low pressure services used for Industrial processing. Main feature is the renewable valve disc, which being softer than the metal seat, gives perfect contact. When the disc becomes worn with continual use it can be readily renewed. Spare discs available in all sizes. Made from synthetic rubber, plastic, rubber, nylon or teflon.

STEAM. Max. Temp. 400° Fah.
Screwed. 200 lbs. per sq. in.
Flanged. 200 lbs. per sq. in.

WATER, OIL, GAS
Screwed. 350 lbs. per sq. in.
Flanged. 250 lbs. per sq. in.



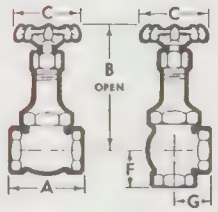
STRAIGHT **102** ANGLE **104**

DIMENSIONS INCHES

Size	A	B	C	D	E	F	G
¼	3¾	5⅜	2½	3¾	7/16	3	2 13/16
¾	4½	6⅛	2⅞	4	7/16	2⅞	2⅞
1	5⅛	6⅜	3⅜	4¾	7/16	3¼	3
1¼	5½	7⅝	3⅝	5¼	½	3½	3⅜
1½	7⅛	8⅜	4⅛	5½	½	3¾	3½
2	8	9⅛	4⅝	6½	⅝	4½	4
2½	9	10½	6	7¼	⅝	4⅝	4⅜
3	10	11½	7	8	⅝	5⅛	5⅛

† *B.S. Table "F" flanges and working conditions.*

* *Screwed B.S.P. Thread.*



STRAIGHT **101** ANGLE **103**

DIMENSIONS INCHES

Size	A	B	C	F	G
¼	2⅜	4¾	2½	—	—
⅜	2½	4⅞	2½	—	—
½	2⅝	5⅜	2½	1 5/16	1 5/16
¾	3⅛	6⅛	2⅞	1 9/16	1 9/16
1	3¾	6⅝	3⅜	1⅞	1⅞
1¼	4¼	7⅝	3⅝	2⅛	2⅛
1½	4⅞	8⅜	4⅛	2 7/16	2 7/16
2	5⅞	9⅛	4⅝	2 15/16	2 15/16
2½	6⅞	10½	6	3 7/16	3 7/16
3	8¼	11½	7	4⅛	4⅛

GLOBE STOP VALVES — "SUPER" — BRONZE

For Steam, Water, Air and Oil

SPECIFICATION

FIG. 62N, 64N *Bronze Body, Cover and Spindle, Stainless Steel Valve and Seat*

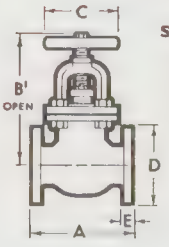
SECTIONAL VIEW
Fig. No. 62N

"Super" Globe Valves are used for Medium Pressure Steam Installations, may also be used with superheated steam. Suitable for Hydraulic and high pressure air line services. Fitted with Stainless Steel Valves and Seats which can be replaced or re-ground.

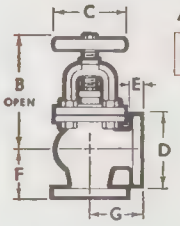
MAXIMUM WORKING PRESSURES

STEAM. Max. Temp. 500° Fah.
250 lbs. per sq. in.

WATER, OIL, GAS
400 lbs. per sq. in.



STRAIGHT **62N**



ANGLE **64N**

DIMENSIONS INCHES

Size	A	B	C	D	E
½	6	7½	3⅜	4½	½
¾	6	8½	3⅜	4½	½
1	6⅜	9⅛	4½	4¾	9/16
1¼	7⅛	9½	4½	5¼	11/16
1½	7⅜	10¼	5½	5½	11/16
2	8½	12 7/16	6	6½	¾
2½	9¼	15	7	7¼	¾
3	10½	16⅝	8	8	⅞

† *B.S. Table "H" flanges.*

DIMENSIONS INCHES

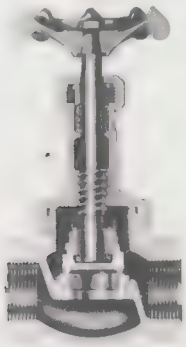
Size	B	C	D	E	F	G
½	7⅛	3⅜	4½	½	3	3
¾	7⅞	3⅜	4½	½	3	3
1	8	4½	4¾	9/16	3¼	3¼
1¼	8⅝	4½	5¼	11/16	3 9/16	3 9/16
1½	9⅜	5½	5½	11/16	3 11/16	3 11/16
2	11 3/16	6	6½	¾	4¼	4¼
2½	13⅜	7	7¼	¾	4⅝	4⅝
3	14⅞	8	8	⅞	5½	5½

† *B.S. Table "H" flanges.*

GLOBE STOP VALVES "VALIDUS" BRONZE
For Steam, Water, Air and Oil

SPECIFICATION

FIG. 501, 502, 511, 512, 503, 513.



SECTIONAL VIEW
Fig. No. 501

Bronze Body and Cover, Manganese Bronze Spindle, Stainless Steel Valve and Seat

Features are angled bodycover joint which ensures pressure tight seals, and flat stainless steel seating that gives a positive and effortless shut-off of steam. These Stainless Steel valves and seats are easily renovated by lapping and are replaceable after prolonged service. Fitted with internal or external rising spindles.

MAXIMUM WORKING PRESSURES

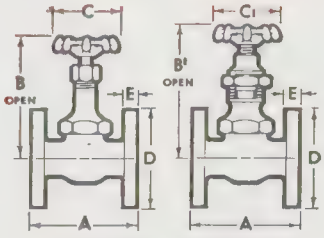
STEAM

Screwed. Max. Temp. 550° F. 300 lbs. per sq. in.
Flanged. Max. Temp. 500° F. 250 lbs. per sq. in.

WATER, OIL, GAS

Screwed, 500 lbs. per sq. in.
Flanged. 400 lbs. per sq. in.

Also available in angle design with screwed ends, inside screw Fig. No. 503, outside screw Fig. No. 513.



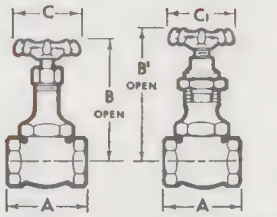
†INSIDE SCREW STRAIGHT — **502**

†OUTSIDE SCREW STRAIGHT — **512**

DIMENSIONS INCHES

Size	A	B	B1	C	C1	D	E
½	3¾	5 5/16	5¾	2½	2 7/8	4½	½
¾	4½	6 3/16	6½	2 7/8	3 3/8	4½	½
1	5 1/8	6 3/8	7 3/16	3 3/8	3 5/8	4 3/4	9/16
1¼	5½	7½	8 1/8	3 5/8	4 1/8	5¼	11/16
1½	7 1/8	8 5/16	9 3/16	4 1/8	4 5/8	5½	11/16
2	8	9 3/16	10 5/16	4 5/8	5½	6½	¾
2½	9	10¼	10¾	6	6	7¼	¾
3	10	11½	12	7	7	8	⅞

† *B.S. Table "H" flanges for steam pressure up to 250 p.s.i. For higher pressures B.S. Table "J" flanges.*



*INSIDE SCREW STRAIGHT — **501**

*OUTSIDE SCREW STRAIGHT — **511**

DIMENSIONS INCHES

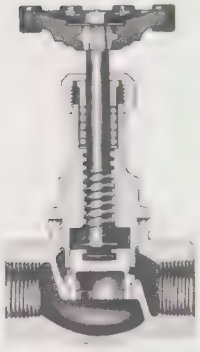
Size	A	B	B1	C	C1
¼	2 3/8	4 5/8	5 5/16	2½	2½
⅜	2½	4 5/8	5 7/16	2½	2½
½	2 5/8	5 5/16	5 3/4	2½	2 7/8
¾	3 1/8	6 3/16	6½	2 7/8	3 3/8
1	3 3/4	6 3/4	7 3/16	3 3/8	3 5/8
1¼	4¼	7½	8 1/8	3 5/8	4 1/8
1½	4 7/8	8 5/16	9 3/16	4 1/8	4 5/8
2	5 7/8	9 3/16	10 5/16	4 5/8	5½
2½	6 7/8	10¼	10¾	6	6
3	8¼	11½	12	7	7

* *Screwed B.S.P. Thread.*

GLOBE STOP VALVES "DUOSEAL" BRONZE
For Steam, Water, Air and Oil

SPECIFICATION

FIG. 1501, 1511, 1502, 1512. *Bronze Body and Cover, Aluminium Bronze Spindle, Stainless Steel Valve and Seat*



SECTIONAL VIEW
INSIDE SCREW
STRAIGHT

Features are heavy octagonal ends to prevent distortion during installation, deep stuffing box, serrated body cover joint, enabling a tight joint to be made and dismantled when necessary.

Flat Stainless Steel Seating. The Slip on valve is retained by a cage in the open position and can be supplied with a mitre face instead of the normal flat face if required. The same seat is used for either valve. Fitted with Internal or External Rising Spindles.

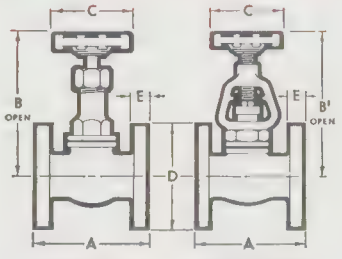
MAXIMUM WORKING PRESSURES

STEAM

Screwed. Max. Temp. 550° F. 350 lbs. per sq. in.
Flanged. Max. Temp. 500 F. 350 lbs. per sq. in.

WATER, OIL, GAS

Screwed. 600 lbs. per sq. in.
Flanged. 550 lbs. per sq. in.



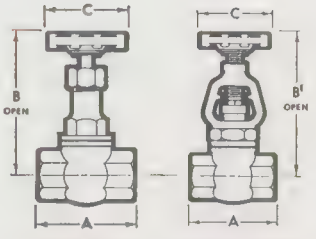
INSIDE SCREW — **1502**

OUTSIDE SCREW — **1512**

DIMENSIONS INCHES

Size	A	B	B1	C	C1	D	E
½	4	5 3/8	6 9/16	2 7/8	3 3/8	4½	5/8
¾	4½	6 1/16	7 5/16	3 3/8	3 3/8	4½	5/8
1	5 1/8	6 5/8	8	3 5/8	4 1/8	4 3/4	¾
1¼	5½	7 11/16	9	4 1/8	4 5/8	5¼	¾
1½	7 1/8	8 3/4	9 3/4	4 5/8	5½	5½	⅞
2	8	9 11/16	11½	7	7	6½	1
2½	9	11¼	13½	9	9	7¼	1
3	10	12½	14 3/8	9	9	8	1¼

† *B.S. Table "J" flanges for steam pressures up to 350 p.s.i. as stocked. Drilled to B.S. table "H" or "J" if required.*



INSIDE SCREW — **1501**

OUTSIDE SCREW — **1511**

DIMENSIONS INCHES

Size	A	B	B1	C	C1
¼	3	5 3/8	6 9/16	2 7/8	3 3/8
⅜	3	5 3/8	6 9/16	2 7/8	3 3/8
½	3¼	5 3/8	6 9/16	2 7/8	3 3/8
¾	3¾	5 3/8	7 5/16	3 3/8	3 5/8
1	4 1/8	6 5/8	8	3 5/8	4 1/8
1¼	5	7 11/16	9	4 1/8	4 5/8
1½	6	8 3/8	9¾	4 5/8	5½
2	7	9 11/16	11½	7	7
2½	8¼	11¼	13½	9	9
3	10	12½	14 3/8	9	9

* *Screwed B.S.P. Taper Thread*

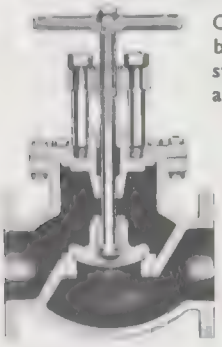
GLOBE STOP VALVES — CAST IRON AND CAST STEEL

For Steam, Water, Oil and Air

SPECIFICATION

FIG. 201, 201A *Cast Iron Body, Bronze Spindle, Valve and Seat*

FIG. 203, 203A *Cast Steel Body, Stainless Steel Spindle, Nickel Alloy Valve and Seat*



SECTIONAL VIEW
Fig. No. 201

Outside yoke and spindle, bolted bonnet. Suitable for installation on Steam Boilers, Pumps and Winding Engines.

MAXIMUM WORKING PRESSURES

CAST IRON

STEAM. Max. Temp. 400° Fah.
150 lbs. per sq. in.
WATER, OIL, GAS
300 lbs. per sq. in.

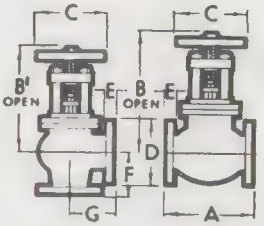
CAST STEEL

STEAM. Max. Temp. 800° Fah.
250 lbs. per sq. in.
WATER, OIL, GAS
500 lbs. per sq. in.

DIMENSIONS INCHES

Size	A	B	B1	C	D	E	F	G
1½	7⅜	11¾	11⅛	5½	5½	1/16	3 1/16	3 1/16
2	8½	13⅜	12¼	7	6½	¾	4¼	4¼
2½	9¼	14⅜	12½	7	7¼	¾	4⅝	5
3	10½	16⅛	14¼	8	8	⅞	5½	5½
3½	11½	17¾	15⅝	9	8½	⅞	5¾	5¾
4	13	18½	16¼	9	9	1	6	6½
5	15	20	17	12	11	1⅛	7	7½
6	17	22⅞	19¾	14	12	1⅛	8	8½
7	19	24	21¼	16	13¼	1¼	8½	9

Dimensions for larger sizes and higher pressures on request.



ANGLE Cast Iron	STRAIGHT Cast Steel
201A	201
Cast Steel	Cast Iron
203A	203

GLOBE STOP VALVES — CAST STEEL

For Steam, Water, Oil and Air

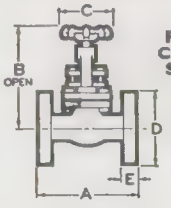
SPECIFICATION

FIG. 245 *Cast Steel Body, Aluminium Bronze Spindle, Stainless Steel Valve and Seat*

For use on moderately superheated steam. Suitable for throttling they find particular application in Power Stations, Industrial Plants and Oil Refineries.

MAXIMUM WORKING PRESSURES

STEAM Max. Temp. 800 Fah. 450 lbs. per sq. in.
WATER, OIL, GAS 900 lbs. per sq. in.



FLANGED† CAST STEEL STRAIGHT

245

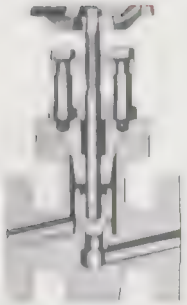
† *B.S. Table "K" Flanges.*

DIMENSIONS INCHES

Size	A	B	C	D	E
½	5⅝	6 13/16	3⅜	4½	¾
¾	6	6 15/16	3⅜	4½	¾
1	7	8 3/16	4½	5	⅞
1¼	7½	9¼	4½	5¼	⅞
1½	8½	10⅛	5½	6	1
2	9½	11 5/16	6	6½	1

GLOBE STOP VALVES — FORGED CARBON STEEL

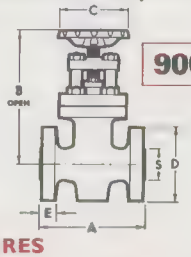
For Steam, Feed Water, Oil and Air



SPECIFICATION

FIG. 900 *Forged Steel Body, Stainless Steel Spindle, Valve and Seat*

Developed for service in Power Stations, Oil Refineries, and Industrial Plants on high pressure—temperature steam or oil lines, and high pressure Hydraulic lines. Particularly suitable for use as Bye-pass and Drain Valves, on medium-high pressure Cast Steel Parallel Slide Valves.



900

MAXIMUM WORKING PRESSURES

WATER, OIL, GAS (non-shock)
Table "S" Flanges: 1800 lbs. per sq. in.
Table "R" Flanges: 1200 lbs. per sq. in.
Table "K" Flanges: 900 lbs. per sq. in.
Table "J" Flanges: 700 lbs. per sq. in.

STEAM. Max. Temp. 800 Fah.
Table "S" Flanges: 900 lbs. per sq. in.
Table "R" Flanges: 600 lbs. per sq. in.
Table "K" Flanges: 450 lbs. per sq. in.
Table "J" Flanges: 350 lbs. per sq. in.

DIMENSIONS INCHES

Size	A	B	C	D	E	S*	S1
½	6	8¾	4½	5	⅞	2¼	2½
¾	7	9⅛	4½	5	⅞	2¼	2½
1	8	10⅛	5¼	5½	1	2½	2 1/16
1¼	9½	11⅜	6½	5¾	1⅛	2¾	3⅛

* *Table "S"—S. Table "J", "K" and "R"—S1.*

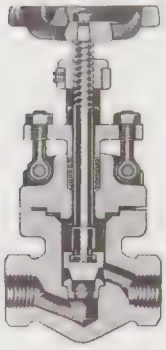
Dimensions given above are for valves with Table "S" flanges. Table "J", "K" and "R" flange diameters (D) are as shown in British Standard Tables. Other dimensions remain the same.

GLOBE STOP VALVES — FORGED CARBON STEEL

Primary Service Rating 800 P.S.I. at 850°F

SPECIFICATION

Fig. 7081SA 7081SB 7081W *Forged carbon Steel Body, Stainless Steel Spindle, Valve and Seat.*



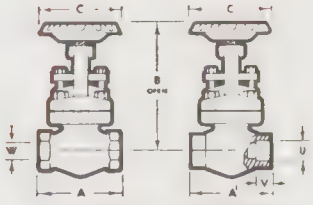
SECTIONAL VIEW

Designed primarily for the Petroleum Industry, complying with BS2995. Available with ends screwed A.P.I. taper thread (SA), B.S.P. Taper thread (S.B.) or with ends machined for A.S.A. socket weld (W).

PRESSURE TEMPERATURE RATINGS

°Fah.*	P.S.I.†	°Fah.*	P.S.I.†
100	2000	650	1430
150	1970	700	1305
200	1940	750	1180
250	1915	800	1015
300	1895	850	800‡
350	1875	875	725
400	1850	900	600
450	1810	925	520
500	1735	950	425
550	1640	975	330
600	1540	1000	235

**Service Temperature.*
†Maximum Non-Shock-Service pressure.
‡Primary Service pressure.



Screwed A.P.I. Thread	Screwed B.S.P. Thread	A.S.A. Socket Weld Ends
7081SA	7081SB	7081W

DIMENSIONS IN INCHES

Size	A	A1	B	C	U	V*	W†
¼	3⅝	3⅝	7	3½	.555	7/16	¼
⅜	3⅝	3⅝	7	3½	.690	½	⅜
½	3⅝	3⅝	7	3½	.855	9/16	½
¾	4⅜	4⅜	7⅛	4¼	1.065	11/16	¾
1	5	5	9¼	5	1.330	⅞	1

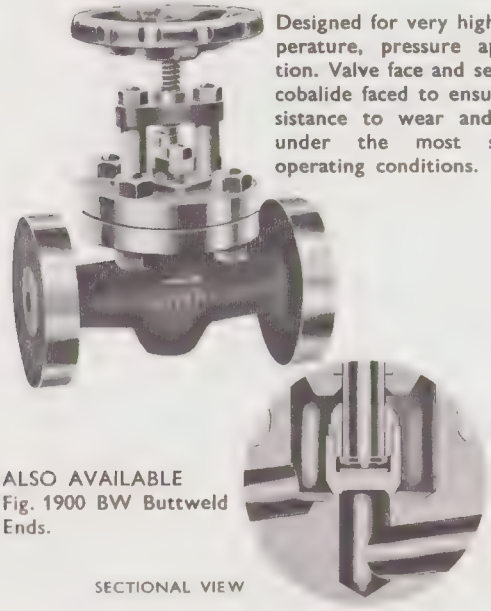
* Depth of Socket
† A.P.I. or B.S.P. Taper Thread

GLOBE STOP VALVES — FORGED ALLOY STEEL

Primary Service Rating 1400 P.S.I. at 900°F

SPECIFICATION

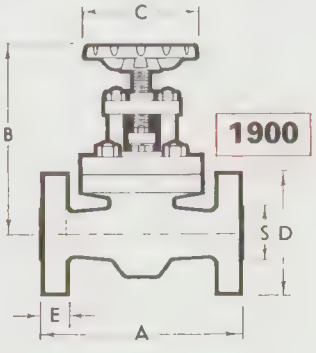
Fig. 1900 *Forged Alloy Steel Body, Stainless Steel, Spindle and Valve, Cobalide Seat.*



Designed for very high temperature, pressure application. Valve face and seat are cobalide faced to ensure resistance to wear and heat under the most severe operating conditions.

ALSO AVAILABLE
Fig. 1900 BW Buttweld Ends.

SECTIONAL VIEW



DIMENSIONS INCHES

Size	A	B	C	D	E	S
½	9	8½	6	5½	1	2½
¾	9	8½	6	5½	1	2½
1	10	9⅞	7	5¾	1⅛	3
1¼	11½	11½	8	6¼	1¼	3¼
1½	12½	12¾	9	6¾	1⅜	3½

PRESSURE TEMPERATURE RATINGS

FOR FLANGES TO BS. 10:1962 TABLE "T"

CARBON STEEL		ALLOY STEEL	
°Fah.	P.S.I.	°Fah.	P.S.I.
0-450	2800	0-450	2800
500	2600	500	2645
550	2400	550	2490
600	2200	600	2335
650	2000	650	2180
700	1800	700	2020
750	1600	750	1865
800	1400	800	1710
825	1210	825	1635
850	1025	850	1555
875	835	875	1480
900	645	900	1400
—	—	925	1085
—	—	950	770
—	—	975	455
Test Pressure		4250	(lbf/m²)

CHECK VALVES — BRONZE

For Saturated Steam, Water, Air and Oil

SPECIFICATION

FIG. 4, 4M, 5, 4A, 4B, 4BF. *Bronze Body, Cap and Valve.*

STANDARD

HORIZONTAL

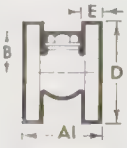
For general pipeline service where horizontal or vertical installation is required.

DIMENSIONS INCHES

Size	A	Al	B	D	E
¼	1¾	—	1	—	—
⅜	2	—	1⅛	—	—
½	2¼	2¾	1½	3¾	⅜
¾	2⅝	3⅛	1¾	4	⅜
1	3¼	3½	2⅛	4¾	⅜
1¼	3⅝	3½	2¼	5¼	½
1½	4⅛	4⅛	2⅝	5½	½
2	5¼	4⅞	2¾	6½	⅝
2½	6	6½	4¼	7¼	⅝
3	7⅜	7⅜	4½	8	⅝
4	8	8	5	9	¾

STANDARD SCREWED

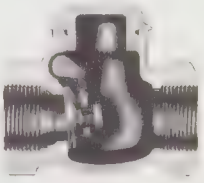
4



STANDARD FLANGED

5

MEDIUM



SWING

SECTIONAL VIEW

MEDIUM HORIZONTAL SCREWED

STANDARD SWING CHECK SCREWED

4M 4B

DIMENSIONS INCHES

Size	A	B
½	2⅛	1¼
¾	2⅝	1⅝
1	2⅞	1¾
1¼	3¼	2
1½	3⅝	2¼
2	4½	2⅝
2½	5½	3¼
3	6½	3⅝
4	8	4½

Size	A	B
½	2½	1 5/16
¾	3	1¾
1	3⅝	2 1/16
1¼	4¾	2¾
1½	5	3
2	5½	3⅜
2½	7⅜	4½
3	8¼	4⅞
4	10	5⅞

Available in flanged design. Fig. 4BF. 2", 2½" & 3" only.

MAXIMUM WORKING PRESSURES

STEAM. Max. Temp. 400 Fah.	WATER, OIL, GAS	HYDRAULIC
Std. Screwed. 200 lbs. per sq in.	Std. Screwed. 300 lbs. per sq. in.	Swing Check. 250 lbs. per sq. in.
Std. Flanged. 200 lbs. per sq. in.	Std. Flanged. 250 lbs. per sq. in.	
Medium. 150 lbs. per sq. in.	Medium. 250 lbs. per sq. in.	

VERTICAL

DIMENSIONS INCHES

Screwed Ends

4A

Also Fig. No. 4AF, B.S. Table "F" flanges and conditions.

Size	A
½	2¼
¾	2½
1	2⅞
1¼	3½
1½	4¼
2	5½
2½	5⅞
3	7
4	8

SECTIONAL VIEW

LOW PRESSURE PETROL AND OIL

For upward flow in vertical low pressure petrol and oil pipe lines. Max. Temp. 200° Fah. Valve disc is made from a dimensionally stable synthetic soft plastic.

DIMENSIONS INCHES

4AP

Size	A	D
½	3	1 7/16
¾	3½	1⅞
1	4	2¼

MAXIMUM WORKING PRESSURE

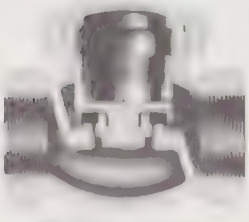
Petrol, Oil (cold) 50 lbs. per sq. in.

CHECK VALVES, RENEWABLE DISC TYPE — BRONZE

For Saturated Steam, Water, Air and Oil

SPECIFICATION

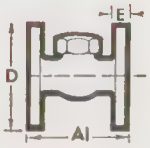
FIG. 121, 122. *Bronze Body, Cover and Spindle, Composition Disc.*



SECTIONAL VIEW

For use in Heating, Hot Water and Air Installations. Main feature is the renewable valve disc, which being softer than the metal seat, gives perfect contact. When the disc becomes worn with continual use it can be readily renewed. Spare discs available in all sizes.

121



122

DIMENSIONS INCHES

Size	A	Al	D	E
¼	2⅜	—	—	—
⅜	2½	—	—	—
½	2⅝	3¾	3¾	7/16
¾	3⅛	4½	4	7/16
1	3¾	5⅛	4¾	7/16
1¼	4¼	5½	5¼	½
1½	4⅞	7⅛	5½	½
2	5⅞	8	6½	⅝
2½	6⅞	9	7¼	⅝
3	8¼	10	8	⅝

MAXIMUM WORKING PRESSURES

STEAM. Max. Temp. 400° Fah.	WATER, OIL, GAS
Screwed. 200 lbs. per sq. in.	Screwed. 350 lbs. per sq. in.
Flanged. 200 lbs. per sq. in.	Flanged. 250 lbs. per sq. in.

CHECK VALVES — "SUPER" — BRONZE

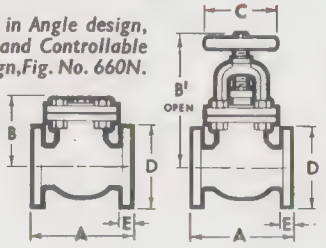
For Steam, Water, Oil and Air

SPECIFICATION

FIG. 65N, 66N, 650N *Bronze Body, Cover, Stainless Steel Valve and Seat*

Also available in Angle design, Fig. No. 66N, and Controllable Lift Angle design, Fig. No. 660N.

Permits flow in one direction only, and closes automatically against any sudden back flow. Normally used in conjunction with a super stop valve.



Straight — **65N**

Cont. Lift — **650N**

MAXIMUM WORKING PRESSURES

STEAM. Max. Temp. 500°Fah. 250 lbs. per sq. in.

WATER, OIL, GAS 400 lbs. per sq. in.

"SUPER" FLANGED † CHECK VALVES

DIMENSIONS INCHES

Size	A	B	B1	C	D	E
½	6	3	7½	3⅜	4½	½
¾	6	3¼	8½	3⅜	4½	½
1	6⅜	3¾	9⅛	4½	4¾	9/16
1¼	7⅛	4⅛	9½	4½	5¼	11/16
1½	7⅜	4 7/16	10¼	5½	5½	11/16
2	8½	5 5/16	12 7/16	6	6½	¾
2½	9¼	6¼	15	7	7¼	¾
3	10½	7	16⅝	8	8	⅞

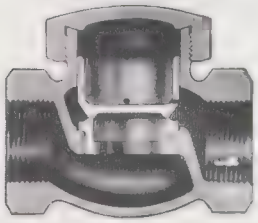
† B.S. Table "H" Flanges.

CHECK VALVES — "VALIDUS" — BRONZE

For Steam, Water, Oil and Air

SPECIFICATION

FIG. 521, 522 *Bronze Body and Cap, Stainless Steel Valve and Seat*



SECTIONAL VIEW

MAXIMUM WORKING PRESSURES

STEAM

Screwed. Max. Temp. 550°F. 300 lbs. per sq. in.

Flanged. Max. Temp. 500°F. 250 lbs. per sq. in.

WATER, OIL, GAS

Screwed. 500 lbs. per sq. in.

Flanged. 400 lbs. per sq. in.

Designed to obviate hammer, the Stainless Steel Valve is accurately guided under all working conditions for a smooth and positive shut off. The Stainless Steel Valve and Seat can readily be replaced or reground.

Screwed Ends — **521** | **551**

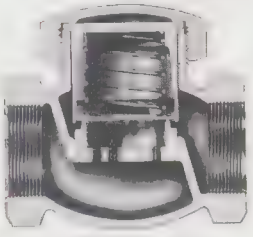
Flanged ends — **552** | **522**

DIMENSIONS INCHES

Size	A	A1	D	E
¼	2⅜	—	—	—
⅜	2½	—	—	—
½	2⅝	3¾	4½	½
¾	3⅛	4½	4½	½
1	3¾	5⅛	4¾	9/16
1¼	4¼	5½	5¼	11/16
1½	4⅞	7⅛	5½	11/16
2	5⅞	8	6½	¾
2½	6⅞	9	7¼	¾
3	8¼	10	8	⅞

SPECIFICATION

FIG. 551, 552 *Bronze Body, Cover and Seat Stainless Steel Disc and Spring*



SECTIONAL VIEW

For compressed air lines only. Constructed with Stainless Steel Disc, accurately ground flat for a leak-proof seal. Stainless Steel spring and precision machined guide gives a positive return of the valve disc to its seat.

MAXIMUM WORKING PRESSURE

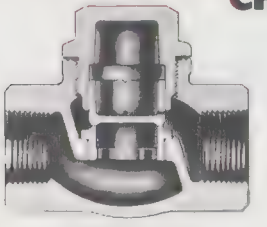
300 lbs. per sq. in. Air only

CONTROLLABLE LIFT DESIGN

Screwed Ends	Flanged Ends
Fig. 532 Inside Screw	Fig. 531 Inside Screw
Fig. 542 Outside Screw	Fig. 541 Outside Screw

CHECK VALVES — "DUOSEAL" — BRONZE

For Steam, Water, Oil and Air



SECTIONAL VIEW

Features are Heavy Octagonal Ends, serrated body cover joint, flat stainless steel seating. If required valve can be supplied with a mitred face instead of the normal flat face.

SPECIFICATION

FIG. 1521, 1522 *Bronze Body and Cap, Stainless Steel Valve and Seat.*

MAXIMUM WORKING PRESSURES

STEAM

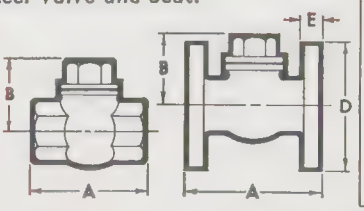
Screwed. Max. Temp. 550°F. 350 lbs. per sq. in.

Flanged. Max. Temp. 500°F. 350 lbs. per sq. in.

WATER, OIL, GAS

Screwed. 600 lbs. per sq. in.

Flanged. 550 lbs. per sq. in.



1521 **1522**

DIMENSIONS INCHES

Size	A	A1	B	D	E
¼	3	—	2	—	—
⅜	3	—	2	—	—
½	3¼	4	2	4½	⅝
¾	3¾	4½	2⅛	4½	⅝
1	4⅛	5⅛	2⅜	4¾	¾
1¼	5	5½	2¾	5¼	¾
1½	6	7⅛	3¼	5½	⅞
2	7	8	4	6½	1
2½	8¼	9	6	7¼	1
3	10	10	6¾	8	1¼

†B.S. Table "J" flanges for steam pressures up to 350 p.s.i. as stocked. Drilled to B.S. Table "H" or "J" if required.

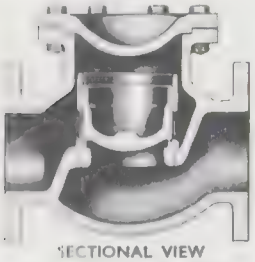
CHECK VALVES — CAST IRON AND CAST STEEL

For Steam, Water and Air

SPECIFICATION

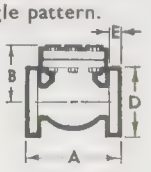
FIG. 400, 400A, 410 *Cast Iron Body, Bronze Valve and Seat*

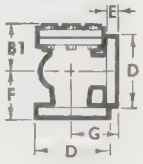
FIG. 402, 402A, 412 *Cast Steel Body, Nickel Alloy Valve and Seat*



SECTIONAL VIEW

For Steam, Feed Water, and Air. Designed to obviate hammer with its destructive effect on installations and the valve itself. Available in both straight and angle pattern.





CAST IRON			
NON-HAMMER FIG. 400	BLED STEAM FIG. 410	STRAIGHT CAST IRON	ANGLE CAST IRON
400	**410**	**400A**	**410A**
CAST STEEL		CAST STEEL	
NON HAMMER FIG. 402	BLED STEAM FIG. 412		
402	**412**	**402A**	**412A**

DIMENSIONS INCHES

Size	A	B	B1	D	E	F	G
1½	7⅜	4¼	3⅜	5½	11/16	3 11/16	3 11/16
2	8½	4½	3½	6½	¾	4¼	4¼
2½	9¼	5⅜	4	7¼	¾	4⅝	5
3	10½	6⅜	4½	8	⅞	5½	5½
3½	11½	6 13/16	4 11/16	8½	⅞	5¾	5¾
4	13	7 9/16	5 1/16	9	1	6	6½
5	15	8½	6	11	1⅛	7	7½
6	17	9¾	6½	12	1⅛	8	8½
7	19	10⅝	6¾	13¼	1¼	8½	9

MAXIMUM WORKING PRESSURES

STEAM. Max. Temperature 400° F. (Iron) 800° F. (Steel) Iron, 150 P.S.I. Steel, 250 P.S.I.

WATER, OIL, GAS Iron, 300 P.S.I. Steel, 500 P.S.I.

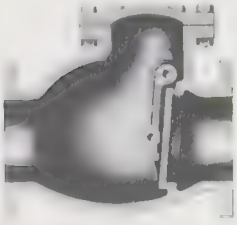
SWING CHECK VALVES — CAST IRON AND CAST STEEL

For Liquids

SPECIFICATION

FIG. 404 *Cast Iron Body, Bronze Valve and Seat*

FIG. 404S *Cast Steel Body, Bronze Valve and Seat*



SECTIONAL VIEW

Installed on horizontal or vertical pipe lines for the control of liquids only. The disc is hinged so that it swings clear of the water way to give a full bore.

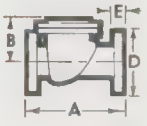
CAST IRON FIG. 404 | CAST STEEL FIG. 404S

MAXIMUM WORKING PRESSURES HYDRAULIC

Iron, to 12-inch size, 200 P.S.I.

Iron, above 12-inch size, 175 P.S.I.

Steel, 300 lbs. per sq. in.



CAST IRON **404**

CAST STEEL **404S**

DIMENSIONS INCHES

Size	A	B	D†	E
2	9½	5¼	6	¾
2½	10¼	5½	6½	¾
3	10¼	6¼	7¼	¾
3½	11¼	7	8	¾
4	13	7½	8½	⅞
5	16	9	10	⅞
6	16	9½	11	⅞
7	18½	11	12	1
8	21	11¾	13¼	1
9	24	13¼	14½	1
10	25	15	16	1
12	27½	17	18	1⅛

†Fig. No. 404S flange dimensions to B.S. Table "F".

CHECK VALVES VERTICAL – CAST IRON AND CAST STEEL

For Steam, Feed Water and Air

SPECIFICATION

FIG. 405 *Cast Iron Body, Bronze Valve and Seat*

FIG. 406 *Cast Steel Body, Nickel Alloy Valve and Seat*

SECTIONAL VIEW

Suitable for installation in vertical pipe lines conveying steam, feed water and air. The valve and seat have been specially designed to obviate hammer, with its destructive effect on installations.

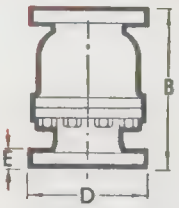
MAXIMUM WORKING PRESSURES

STEAM. Max. Temperature 400° F. (Iron) 800° F. (Steel) Iron, 150 P.S.I. Steel, 250 P.S.I.

WATER, OIL, GAS Iron, 300 P.S.I. Steel, 500 P.S.I.

CAST IRON **405**

CAST STEEL **406**



Dimensions of sizes larger than shown will be supplied on request.

DIMENSIONS INCHES

Size	B	D	E
1½	7⅜	5½	11/16
2	8½	6½	¾
2½	9¼	7¼	¾
3	10½	8	⅞
3½	11½	8½	⅞
4	13	9	1
5	15	11	1⅛
6	17	12	1⅛
7	19	13¼	1¼

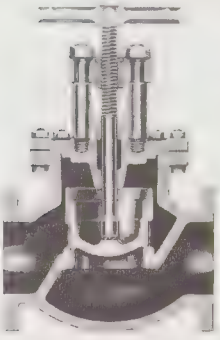
CHECK VALVES CONTROLLABLE LIFT–CAST IRON AND CAST STEEL

For Steam, Feed Water and Air

SPECIFICATION

FIG. 401, 401A *Cast Iron Body, Bronze Valve and Seat*

FIG. 403, 403A *Cast Steel Body, Stainless Steel Spindle, Nickel Alloy Valve and Seat*



SECTIONAL VIEW
Fig. No. 401

Designed to control the amount of flow with the non-return action of a check valve. For Steam, Feed Water and Air. Available in both straight and angle pattern.

MAXIMUM WORKING PRESSURES

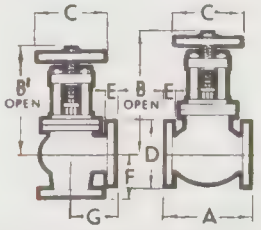
CAST IRON
STEAM. Max. Temp. 400° Fah.
150 lbs. per sq. in.
WATER, OIL, GAS
300 lbs. per sq. in.

CAST STEEL
STEAM. Max. Temp. 800° Fah.
250 lbs. per sq. in.
WATER, OIL, GAS
500 lbs. per sq. in.

Dimensions and working pressures for larger sizes are available on request.

DIMENSIONS INCHES

Size	A	B	B1	C	D	E	F	G
1½	7⅜	11¾	11⅛	5½	5½	1/16	3 1/16	3 1/16
2	8½	13⅛	12¼	7	6½	¾	4¼	4¼
2½	9¼	14⅝	12½	7	7¼	¾	4⅝	5
3	10½	16⅛	14¼	8	8	⅞	5½	5½
3½	11½	17¾	15⅝	9	8½	⅞	5¾	5¾
4	13	18¾	16⅛	9	9	1	6	6½
5	15	20	17	12	11	1⅛	7	7½
6	17	22⅞	19¾	12	12	1⅛	8	8½
7	19	24	21¼	16	13¼	1¼	8½	9



ANGLE
Cast Iron **401A**
Cast Steel **403A**

STRAIGHT
Cast Iron **401**
Cast Steel **403**

CHECK VALVES – ACCESSIBLE FEED – CAST IRON AND CAST STEEL

For Feed Water

SPECIFICATION

FIG. 351 *Cast Iron Body, Bronze Valve and Seat*

FIG. 352 *Cast Steel Body, Stainless Steel Spindle, Nickel Alloy Valve and Seat*

Designed for right or left hand installation on boilers for feed water control. Accessible Feed Check Valves enable the non-hammer check valve and feed water service to be overhauled while maintaining boiler pressure with the stop valve. Also available with bronze body-cover, etc., Fig. No. 350.

DIMENSIONS INCHES

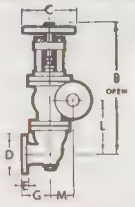
Size	B	C	D	E	G	L	M	J†
1½	19½	5½	5½	⅝	4¼	8⅜	3½	4¼
2	20 13/16	7	6½	¾	4½	8 9/16	5	5
2½	23	7	7¼	¾	5	10½	4⅝	5
3	26¾	8	8	¾	5½	12½	5¼	5½

Details for higher pressure valves on request. †J—Centre line to face of outlet flange.

MAXIMUM WORKING PRESSURES

Cast Iron. 150 lbs. per sq. in.
Cast Steel. 250 lbs. per sq. ft.

Cast Iron **351**
Cast Steel **352**

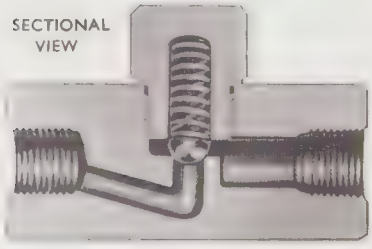


CHECK VALVES – STAINLESS STEEL – CARBON STEEL

For High Pressure Steam, Water, Oil and Chemicals

SPECIFICATION **FIG. No. CC-794** *Mild Steel*
FIG. No. CC-894 *Stainless Steel*

SECTIONAL VIEW



The design of both the Stainless Steel and Mild Steel Valves is identical, machined from bar stock sections. Both types have a spherical valve component which is spring loaded.

MAXIMUM WORKING PRESSURES
STEAM. Max. Temperature 420° F.
300 lbs. per sq. inch.
AIR. 1000 lbs. per sq. inch
WATER and OIL. 3000 lbs. per sq. in.

DIMENSIONS INCHES

Size	A
¼″	2″
⅜″	2″
½″	3¼″
¾″	3¼″
1″	4¾″

CC794 CARBON STEEL

CC894 STAINLESS STEEL

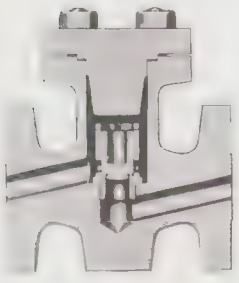
CHECK VALVES AND CONTROLLABLE LIFT CHECK VALVES — FORGED STEEL

For Steam, Feed Water, Oil and Air

SPECIFICATION

FIG. 906 *Forged Steel Body, Stainless Steel Valve and Seat*

FIG. 910 *Forged Steel Body, Stainless Steel Spindle, Valve and Seat*



SECTIONAL VIEW

For high pressure-temperature steam, or oil lines and high pressure hydraulic lines. Used in Power Stations, Oil Refineries and Industrial Plants.
The controllable lift check valve, is particularly suitable where a throttled supply together with a check action is required.

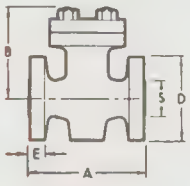
MAXIMUM WORKING PRESSURES

STEAM	WATER, OIL, AIR
Max. Temperature 800° Fah.	Cold, Static (Non-shock)
Table "S" Flanges:—900 lbs. per sq. in.	Table "S" Flanges:—1800 lbs. per sq. in.
Table "R" Flanges:—600 lbs. per sq. in.	Table "R" Flanges:—1200 lbs. per sq. in.
Table "K" Flanges:—450 lbs. per sq. in.	Table "K" Flanges:—900 lbs. per sq. in.
Table "J" Flanges:—350 lbs. per sq. in.	Table "J" Flanges:—700 lbs. per sq. in.

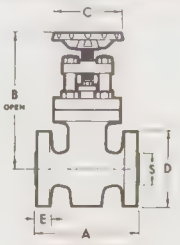
DIMENSIONS INCHES

Size	A	B	B1	C	D	E	S*	S1
½	6	4½	8¾	4½	5	⅞	2¼	2½
¾	7	4¾	9⅛	4½	5	⅞	2¼	2½
1	8	5	10⅛	5¼	5½	1	2½	2 1/16
1¼	9½	5⅝	11⅜	6½	5¾	1⅛	2¾	3⅛

*Table "S"—S. Table "J" "K" and "R"—S1. Dimensions given above are for Valves with Table "S" flanges. Table "J" "K" and "R" flange diameters (D) are as shown in British Standard Tables. Other dimensions remain the same.



906



910

CHECK VALVES AND CONTROLLABLE LIFT CHECK VALVES — FORGED ALLOY STEEL

For Steam, Feed Water, Oil and Air

SPECIFICATION

FIG. 1906 *Forged Steel Body, Stainless Steel Valve and Seat*

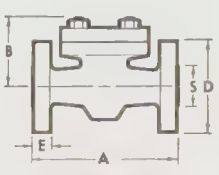
FIG. 1910 *Forged Steel Body, Stainless Steel Spindle, Valve and Seat*

SECTIONAL VIEW

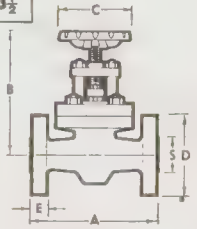
Designed for very high temperature, pressure application. Valve face and seat are cobalide faced to ensure resistance to wear and heat under the most severe operating conditions.

DIMENSIONS INCHES

Size	A	B	B1	C	D	E	S
½	9	4½	8½	6	5½	1	2½
¾	9	4½	8½	6	5½	1	2½
1	10	5	9⅞	7	5¾	1⅛	3
1¼	11½	5½	11½	8	6¼	1¼	3¼
1½	12½	6¼	12¾	9	6¾	1⅜	3½



1906



1910

Also available with buttweld ends machined to specifications, figure number 1906 BW, 1910 BW.

PRESSURE TEMPERATURE RATINGS

FOR FLANGES TO BS. 10:1962 TABLE "T"

CARB. STEEL		ALLOY STEEL	
°Fah.	P.S.I.	°Fah.	P.S.I.
0-450	2800	0-450	2800
500	2600	500	2645
550	2400	550	2490
600	2200	600	2335
650	2000	650	2180
700	1800	700	2020
750	1600	750	1865
800	1400	800	1710
825	1210	825	1635
850	1025	850	1555
875	835	875	1480
900	645	900	1400
—	—	925	1085
—	—	950	770
—	—	975	455
Test Pressure		4250 (lbf/m²)	

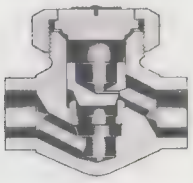
PISTON CHECK VALVES — BALL CHECK VALVES — FORGED STEEL

Primary Service Rating 800 P.S.I. at 850° Fah.

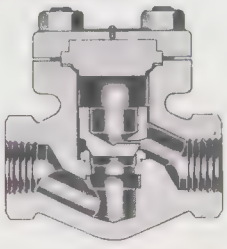
SPECIFICATION

FIG. 7484 *Forged Carbon Steel Body, Union Cover Nut 13% Chrome Steel Valve & Seat*
FIG. 7884 *Forged Carbon Steel Body, Bolted Cover 13% Chrome Steel Valve & Seat*
FIG. 7483 *Forged Carbon Steel Body, Union Cover Nut 13% Chrome Steel Ball & Seat*
FIG. 7883 *Forged Carbon Steel Body, Bolted Cover 13% Chrome Steel Ball & Seat*

PISTON CHECK VALVES



UNION NUT COVER



BOLTED COVER

Designed primarily for the Petroleum Industry, complying with BS2995. Available with ends screwed A.P.I. taper thread (SA), B.S.P. Taper thread (S.B.) or with ends machined for A.S.A. socket weld (W).

PRESSURE TEMPERATURE RATINGS

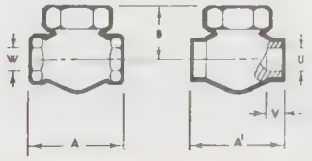
°Fah.*	P.S.A.‡	°Fah.*	P.S.I.‡
100	2000	650	1430
150	1970	700	1305
200	1940	750	1180
250	1915	800	1015
300	1895	850	800†
350	1875	875	725
400	1850	900	600
450	1810	925	520
500	1725	950	425
550	1640	975	330
600	1540	1000	235

* Service Temperature
‡ Maximum non-shock service pressure
† Primary service pressure

BS 2995: 1966 CLASS 800
APPENDIX "B"

DIMENSIONS INCHES

Size	A	A1	B	U	V*	W†
1/4	3 1/8	3 1/8	2 3/8	.555	7/16	1/4
3/8	3 1/8	3 1/8	2 3/8	.690	1/2	3/8
1/2	3 5/8	3 5/8	2 3/8	.855	9/16	1/2
3/4	4 3/8	4 3/8	2 5/8	1.065	11/16	3/4
1	5	5	3	1.330	7/8	1



PISTON CHECK VALVES

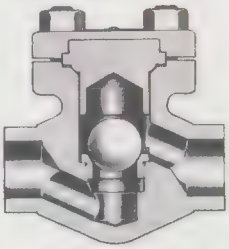
7484SA	7484SB	7484W
Screwed A.P.I. Thread	Screwed B.S.P. Thread	ASA Socket Weld Ends

BALL CHECK VALVES

7483SA	7483SB	7483W
Screwed A.P.I. Thread	Screwed B.S.P. Thread	ASA Socket Weld Ends

BALL CHECK VALVES

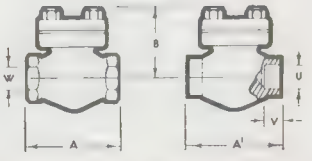
UNION NUT COVER



BOLTED COVER

DIMENSIONS INCHES

Size	A	A1	B	U	V*	W†
1/4	3 5/8	3 5/8	2 7/8	.555	7/16	1/4
3/8	3 5/8	3 5/8	2 7/8	.690	1/2	3/8
1/2	3 5/8	3 5/8	2 7/8	.855	9/16	1/2
3/4	4 3/8	4 3/4	3 3/8	1.065	11/16	3/4
1	5	5	3 7/8	1.330	7/8	1



PISTON CHECK VALVES

7884SA	7884SB	7884W
Screwed A.P.I. Thread	Screwed B.S.P. Thread	ASA Socket Weld Ends

BALL CHECK VALVES

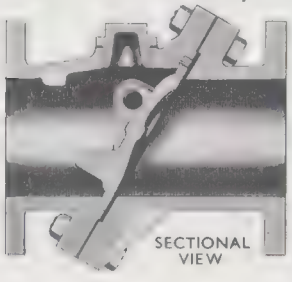
7883SA	7883SB	7883W
Screwed A.P.I. Thread	Screwed B.S.P. Thread	ASA Socket Weld Ends

CHECK VALVES TILTING DISC — CAST IRON, CAST STEEL

For Hydraulic Services

SPECIFICATION

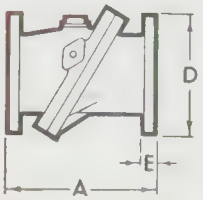
FIG. 415 *Cast Iron Body, Bronze Valve and Seat*
FIG. 416 *Cast Steel Body, Bronze Valve and Seat*



The Tilting Disc Reflux or Non-Return Valve has been specially developed to operate without slamming under severe operating conditions on hydraulic services.

MAXIMUM WORKING PRESSURE

Cast Iron Hydraulic 250 lbs. per sq. in.
Cast Steel Hydraulic 350 lbs. per sq. in.



415	416
Cast Iron	Cast Steel

DIMENSIONS INCHES

Size	A	D
3	9 1/2	8
4	11 1/2	9
6	14	12
8	18	14 1/2
10	21 3/4	17
12	25 1/2	19 1/4

Cast Iron
Table "F" Flanges
Cast Steel
Table "H" Flanges

DIAPHRAGM VALVES

For Water, Air, Gas and Chemicals

SPECIFICATION *Cast Iron, Bronze or Stainless Steel body.*
Cast Iron available, Glass, Lead or rubber lined.

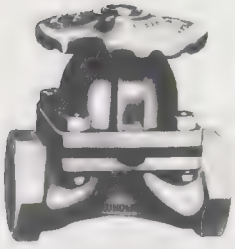
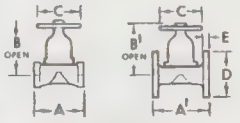


Fig. No. 3001

SECTIONAL VIEW
Fig. No. 3002



TYPE A

3001	3002
Straight Screwed	Straight Flanged

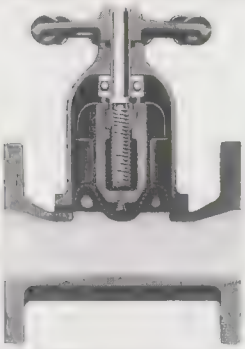
TYPE K.B.
Straight Through Body

DIMENSIONS INCHES AND WORKING PRESSURES P.S.I.

Size	A	A1	B	B1	C	D	E	WP	WP1*
¼	1⅞	—	2 3/16	—	1½	—	—	200	—
⅜	1⅞	—	2⅜	—	1½	—	—	200	—
½	2½	4	2½	3	2¼	3¾	½	200	—
¾	3¼	4⅝	3	3½	2¾	4	½	200	—
1	4¼	5	3½	3¾	3¼	4½	½	200	—
1¼	4¾	5¾	4⅛	3⅞	3¾	4¾	⅝	175	—
1½	5½	6¼	5 1/16	5 9/16	4⅝	5¼	⅝	150	—
2	6½	7½	7 1/16	6 1/16	5½	6	¾	125	175
2½	8	8½	8⅜	7⅞	6½	6½	¾	100	175
3	10	10	9⅛	8½	7¾	7½	¾	100	150
4	—	12	—	10⅝	10⅛	8½	⅞	75	150
5	—	14	—	12¾	12¼	10	⅞	60	125
6	—	16	—	14¼	14½	11	⅞	50	125
8	—	20½	—	19⅝	19	13¼	1	—	100
9	—	22	—	22	19	14½	1	—	80
10	—	25	—	23¾	23	16	1	—	70
12	—	29½	—	27⅝	27½	18	1⅛	—	60
14	—	29½	—	35	27½	20¾	1¼	—	50

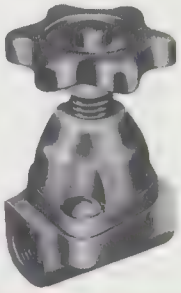
* Working pressures with ball thrust races — 2" to 6" sizes to order only.

Diaphragm valves are suitable for applications handling gas, air, water, semi-fluid and viscous substances. Grit and small solids in suspension do not prevent closure of valve.



SECTIONAL VIEW
OPEN

Type "KB" Valves has straight through body which is used when handling fluids that are liable to "build-up" and obstruct the passage.



Type "NL" Valves. Aluminium body. Sizes ¼" and ⅜" only. Suitable for Pressure and Vacuum applications.

DIAPHRAGM GRADES AND RECOMMENDATIONS

LETTER GRADES

Grade	Colour Mark	Service	Temperature Range	Type A	Type KB
A	Brown Spot	Abrasive Powders and Slurries.	−40°C to +100°C	½" to 14"	½" to 10"
B	Orange Spot	Severe acid and alkali conditions. Most sulphuric acid concentrations (up to 85%) at ambient temperatures. Hydrochloric acid, caustic alkalis and many esters. Very low vapour and gas permeability. Inert gases, many industrial gases such as blast furnace, producer, water gases and hydrogen.	−25°C to +100°C	½" to 14"	½" to 10"
C	Green Spot	Mineral, animal and vegetable oils and fats. Petroleum, paraffin, petrol and fatty acids. Fuel oils and aliphatic hydrocarbons.	+ 5°C to 100°C	¼" to 14"	½" to 10"
H	All black	Mineral, animal and vegetable oils, fatty acids and greases. Animal fats, hot compressed air.	− 5°C to +100°C	½" to 14"	½" to 10"
Q	Red Spot	Water (clean, dirty), air. Caustic alkalis, hydrochloric and phosphoric acids, inorganic salts.	−40°C to +100°C	½" to 14"	½" to 10"
S	White Spot	Resistance similar to "Q" but reduced temperature range.	−25°C to + 70°C	½" to 14"	½" to 10"
T	Blue Spot	Generally similar to "Q" and "S", but with oil resistant facing for compressed air and general works services.	− 5°C to +100°C	½" to 14"	—
W	All white	Chemical resistance similar to "S" but used for food and pharmaceutical services where a black diaphragm is not favoured. Acetone, alcohol and methylated spirit. Not for mineral acid services.	−45°C to + 70°C	¼" to 14"	½" to 10"

NUMBERED GRADES

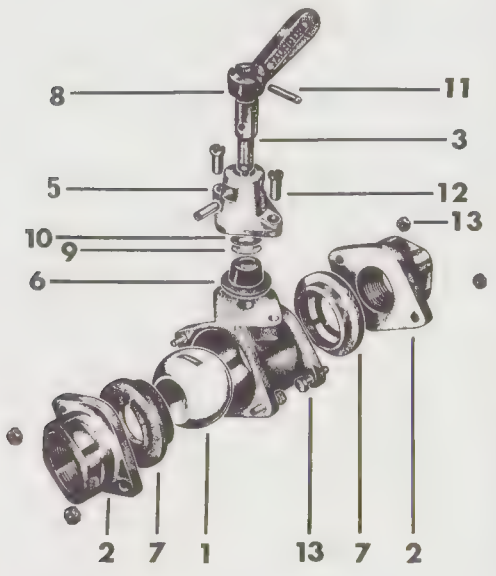
Grade	Service	Temperature Range	Type A	Type KB
142	Oxidising acids—sulphuric up to 98% and nitric up to 65% at normal ambient temperatures.	−30°C to + 60°C	½" to 5"	—
170	Similar to Grade "B" but for higher temperatures. Intermittent steam sterilisation. Pharmaceutical services.	−20°C to +130°C	¼" to 14"	½" to 10"
214	Highest chemical resistance of any diaphragm.	−20°C to +150°C	¼" to 8"	—

Maximum pressure 150 p.s.i. in ½" and ¾" and 100 p.s.i. in 1" to 8" sizes.

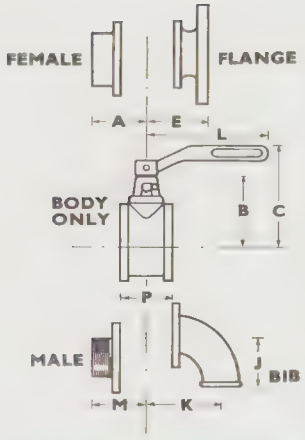
SAUNDERS BALL PLUG VALVES

For Water, Oil, Viscous Liquids and Vacuum

SPECIFICATION *Body Cast Iron, Bronze, Stainless Steel, Aluminium. Ball plug, Chrome Plated Cast Iron, Nylon Coated Cast Iron. Stainless Steel, Bronze, Nylon Coated Bronze, Nylon Coated Aluminium*



	Part	Materials	Part No.
1	BALL PLUG	Nylon Coated Cast Iron	1614
		Chrome Plated Cast Iron	1814
		Plain Bronze	1114
		Nylon Coated Bronze	1714
		Plain Stainless Steel	1214
2	FLANGED END	Cast Iron	C10
		Bronze	B10
		Stainless Steel	F10
2A	SCREWED FEMALE END	Cast Iron	C01
		Bronze	B01
		Stainless Steel	F01
2B	BIB END	Cast Iron	C06
		Bronze	B06
		Stainless Steel	F06
2C	MALE END	Cast Iron (Malleable)	C08
		Bronze	B08
3	STEM	Steel	1012
		Chrome Plated Steel	1312
		Bronze	1112
		Stainless Steel	1212
4	SEAL SUPPORT RING	Steel	1031
		Bronze	1131
		Stainless Steel	1231
5	BONNET	Aluminium Alloy	1010A
		Malleable Iron	1010M
6	STEM SEAL (Diaphragm)	C3 (Buna-N)	1015
		226 (Viton)	1032
		241 (PTFE)	1042
7	SEATS	C9 (Buna-N)	1016
		241 (PTFE)	1016T
8	HANDLE	Aluminium Alloy	1013A
		Malleable Iron	1013M
9	SHIELD	Steel (Standard)	1011
10	SHIELD WASHER	C3 (Buna-N) (Standard)	1017
11	HANDLE PIN	Steel	1091
12	BONNET SCREWS	Steel (Complete Set)	
13	BOLTS & NUTS	Steel (Complete Set)	
14	BOTTOM BEARING PIN	Steel	C902
		Bronze	B902
		Stainless Steel	F902
15	BEARING WASHER	Buna-N	
		PTFE	



STANDARD DIMENSIONS INCHES

BSP Size	A	B	C	E	J	K	L	M	P
½	1 13/16	2	3¼	2 5/16	1¼	2⅛	2⅝	2⅛	1¾
¾	1⅞	2⅛	3⅜	2 5/16	1⅜	2½	2⅝	2¼	1¾
1	2 1/16	2⅜	3⅝	2½	2	2⅞	2⅝	2⅜	1¾
1¼	2⅜	2⅝	4⅛	2⅞	2⅞	3⅞	3½	2⅝	2⅛
1½	2¾	3	4½	3⅛	3¼	4¾	5	3	2⅜
2	2⅞	3⅝	5¼	3¾	3½	4⅞	9	3¼	2¾
2½	4¼	5⅜	6⅜	4¼	—	—	17	5	4¼
3	5	5⅜	6⅜	5	—	—	17	5	4¾
4	—	6⅛	7	6	—	—	17	—	5¾

Flanged Valves are supplied drilled to B.S. Table 'D' as Standard. Valves with Flanges machined and drilled to B.S. Table 'F' and A.S.A. are available on application, at a surcharge of 10%.

ABBREVIATIONS USED

Body
C.I. — Cast Iron
Br. — Bronze (Gunmetal)
S/S — Stainless Steel
Al. — Aluminium

Ball Plug
NC/Cl. — Nylon Coated Cast Iron
CP/Cl. — Chrome Plated Cast Iron
S/S — Stainless Steel
Br. — Bronze (Gunmetal)
NC/Br. — Nylon Coated Bronze (Gunmetal)
NC/Al. — Nylon Coated Aluminium

Stem
CP/S — Chrome Plated Steel
S/S — Stainless Steel
M/B — Manganese Bronze

MAXIMUM WORKING PRESSURE — TEMPERATURE RATINGS

Trim Code	½" & ¾"	1" & 1¼"	1½" & 2"	2½" & 3"	4"
G	250 psi up to 100°F 200 psi up to 212°F	200 psi up to 100°F 150 psi up to 212°F	175 psi up to 100°F 100 psi up to 212°F	150 psi up to 100°F 75 psi up to 212°F	120 psi up to 100°F 60 psi up to 212°F
Y	150 psi up to 212°F	150 psi up to 212°F	100 psi up to 212°F	75 psi up to 212°F	50 psi up to 212°F
I. W. R. P.	250 psi @ 100°F 200 psi @ 194°F 150 psi @ 266°F 100 psi @ 338°F 50 psi @ 392°F 25 psi @ 400°F	200 psi @ 100°F 150 psi @ 212°F 100 psi @ 302°F 50 psi @ 392°F 25 psi @ 400°F	175 psi @ 100°F 150 psi @ 158°F 100 psi @ 266°F 50 psi @ 375°F 25 psi @ 400°F	150 psi @ 100°F 100 psi @ 221°F 50 psi @ 356°F 25 psi @ 400°F	120 psi @ 100°F 100 psi @ 185°F 50 psi @ 335°F 25 psi @ 400°F

SAUNDERS BALL PLUG VALVES

WITHOUT ENDS

BSP SIZE ½" TO 4"

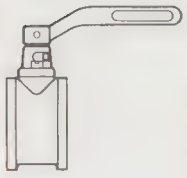


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
229G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
229T	C.I.	CP/S	PTFE	Viton	CP/Cl.
229W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
229R	C.I.	S/S	PTFE	Viton	S/S
229P	C.I.	S/S	PTFE	PTFE	S/S
239Y	Br.	M/B	Buna-N	Buna-N	Br.
239G	Br.	M/B	Buna-N	Buna-N	NC/Br.
239R	Br.	M/B	PTFE	Viton	Br.
239P	Br.	M/B	PTFE	PTFE	Br.
249Y	S/S	S/S	Buna-N	Buna-N	S/S
249R	S/S	S/S	PTFE	Viton	S/S
249P	S/S	S/S	PTFE	PTFE	S/S
259G	AL.	S/S	Buna-N	Buna-N	NC/Al.
259P	AL.	S/S	PTFE	PTFE	S/S

FLANGED — FLANGED ✻

BSP SIZE ½" TO 4"

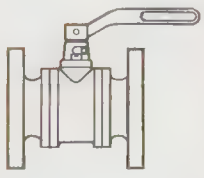


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
221G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
221T	C.I.	CP/S	PTFE	Viton	CP/Cl.
221W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
221R	C.I.	S/S	PTFE	Viton	S/S
221P	C.I.	S/S	PTFE	PTFE	S/S
231Y	Br.	M/B	Buna-N	Buna-N	Br.
231G	Br.	M/B	Buna-N	Buna-N	NC/Br.
231R	Br.	M/B	PTFE	Viton	Br.
231P	Br.	M/B	PTFE	PTFE	Br.
241Y	S/S	S/S	Buna-N	Buna-N	S/S
241R	S/S	S/S	PTFE	Viton	S/S
241P	S/S	S/S	PTFE	PTFE	S/S
251G	AL.	S/S	Buna-N	Buna-N	NC/Al.
251P	AL.	S/S	PTFE	PTFE	S/S

FEMALE — FEMALE

BSP SIZE ½" TO 3"

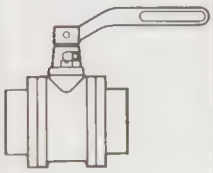


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
220G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
220T	C.I.	CP/S	PTFE	Viton	CP/Cl.
220W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
220R	C.I.	S/S	PTFE	Viton	S/S
220P	C.I.	S/S	PTFE	PTFE	S/S
230Y	Br.	M/B	Buna-N	Buna-N	Br.
230G	Br.	M/B	Buna-N	Buna-N	NC/Br.
230R	Br.	M/B	PTFE	Viton	Br.
230P	Br.	M/B	PTFE	PTFE	Br.
240Y	S/S	S/S	Buna-N	Buna-N	S/S
240R	S/S	S/S	PTFE	Viton	S/S
240P	S/S	S/S	PTFE	PTFE	S/S

FEMALE — FLANGED ✻

BSP SIZE ½" TO 3"

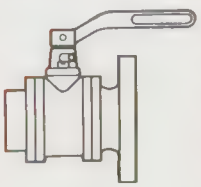


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
226G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
226T	C.I.	CP/S	PTFE	Viton	CP/Cl.
226W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
226R	C.I.	S/S	PTFE	Viton	S/S
226P	C.I.	S/S	PTFE	PTFE	S/S
236Y	Br.	M/B	Buna-N	Buna-N	Br.
236G	Br.	M/B	Buna-N	Buna-N	NC/Br.
236R	Br.	M/B	PTFE	Viton	Br.
236P	Br.	M/B	PTFE	PTFE	Br.
246Y	S/S	S/S	Buna-N	Buna-N	S/S
246R	S/S	S/S	PTFE	Viton	S/S
246P	S/S	S/S	PTFE	PTFE	S/S

MALE — MALE

BSP SIZE ½" TO 2"

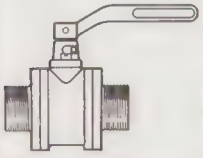


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
222G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
222T	C.I.	CP/S	PTFE	Viton	CP/Cl.
222W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
222R	C.I.	S/S	PTFE	Viton	S/S
222P	C.I.	S/S	PTFE	PTFE	S/S
232Y	Br.	M/B	Buna-N	Buna-N	Br.
232G	Br.	M/B	Buna-N	Buna-N	NC/Br.
232R	Br.	M/B	PTFE	Viton	Br.
232P	Br.	M/B	PTFE	PTFE	Br.

MALE — FLANGED ✻

BSP SIZE ½" TO 3"

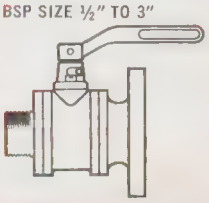


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
228G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
228T	C.I.	CP/S	PTFE	Viton	CP/Cl.
228W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
228R	C.I.	S/S	PTFE	Viton	S/S
228P	C.I.	S/S	PTFE	PTFE	S/S
238Y	Br.	M/B	Buna-N	Buna-N	Br.
238G	Br.	M/B	Buna-N	Buna-N	NC/Br.
238R	Br.	M/B	PTFE	Viton	Br.
238P	Br.	M/B	PTFE	PTFE	Br.

FEMALE — MALE

BSP SIZE ½" TO 2"

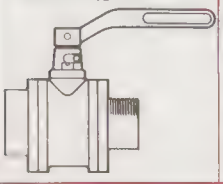


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
227G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
227T	C.I.	CP/S	PTFE	Viton	CP/Cl.
227W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
227R	C.I.	S/S	PTFE	Viton	S/S
227P	C.I.	S/S	PTFE	PTFE	S/S
237Y	Br.	M/B	Buna-N	Buna-N	Br.
237G	Br.	M/B	Buna-N	Buna-N	NC/Br.
237R	Br.	M/B	PTFE	Viton	Br.
237P	Br.	M/B	PTFE	PTFE	Br.

MALE — BIB

BSP SIZE ½" TO 2"

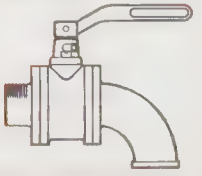


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
225G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
225T	C.I.	CP/S	PTFE	Viton	CP/Cl.
225W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
225R	C.I.	S/S	PTFE	Viton	S/S
225P	C.I.	S/S	PTFE	PTFE	S/S
235Y	Br.	M/B	Buna-N	Buna-N	Br.
235G	Br.	M/B	Buna-N	Buna-N	NC/Br.
235R	Br.	M/B	PTFE	Viton	Br.
235P	Br.	M/B	PTFE	PTFE	Br.

FEMALE — BIB

BSP SIZE ½" TO 2"

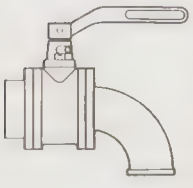


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
223G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
223T	C.I.	CP/S	PTFE	Viton	CP/Cl.
223W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
223R	C.I.	S/S	PTFE	Viton	S/S
223P	C.I.	S/S	PTFE	PTFE	S/S
233Y	Br.	M/B	Buna-N	Buna-N	Br.
223G	Br.	M/B	Buna-N	Buna-N	NC/Br.
233R	Br.	M/B	PTFE	Viton	Br.
233P	Br.	M/B	PTFE	PTFE	Br.
243Y	S/S	S/S	Buna-N	Buna-N	S/S
243R	S/S	S/S	PTFE	Viton	S/S
243P	S/S	S/S	PTFE	PTFE	S/S

FLANGED — BIB ✻

BSP SIZE ½" TO 2"

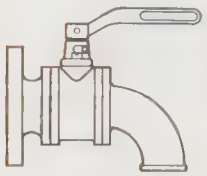
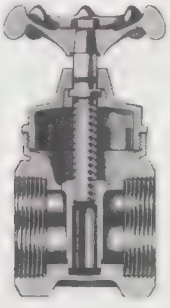


Fig. No.	Body	Stem	Seat	Stem Seal	Ball Plug
224G	C.I.	Steel	Buna-N	Buna-N	NC/Cl.
224T	C.I.	CP/S	PTFE	Viton	CP/Cl
224W	C.I.	CP/S	PTFE	PTFE	CP/Cl.
224R	C.I.	S/S	PTFE	Viton	S/S
224P	C.I.	S/S	PTFE	PTFE	S/S
234Y	Br.	M/B	Buna-N	Buna-N	Br.
234G	Br.	M/B	Buna-N	Buna-N	NC/Br.
234R	Br.	M/B	PTFE	Viton	Br.
234P	Br.	M/B	PTFE	PTFE	Br.
244Y	S/S	S/S	Buna-N	Buna-N	S/S
244R	S/S	S/S	PTFE	Viton	S/S
24P4	S/S	S/S	PTFE	PTFE	S/S

GATE VALVES — BRONZE
For Water, Oil and Gas

SPECIFICATION

FIG. 59L. *Light Duty, Bronze Body, Cover, Spindle and Valve.*
FIG. 59E. *Light Duty, Bronze Body, Cover, Spindle and Valve*
FIG. 59M, M60. *Medium Duty, Bronze Body, Cover, Spindle and Valve*
FIG. 59, 60 *Bronze Body, Cover, Spindle and Valve*



SECTIONAL VIEW

FIG. No. 59E

FIG. 59E: Light Pattern for Liquids within the temperature Range — 40° F. to 300° F. VITRON "O" Ring replaces conventional stuffing Box and Packing.

Fig. No. 59L

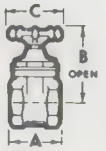
FIG. 59L: Hot pressed Brass, for use on low and medium pressure hot and cold water reticulation services—economical —efficient.

Light Screwed

59L

DIMENSIONS INCHES

Size	A	B	C
½	1 7/8	3 9/16	2 1/8
¾	2	4 3/16	2 1/2
1	2 1/4	4 7/8	2 1/2



Light Screwed

59E

DIMENSIONS INCHES

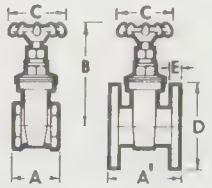
Size	A	B	C
½	1 7/8	2 1/2	1 7/8
¾	2	2 3/4	2 1/8
1	2 1/8	3 1/4	2 1/2
1 1/4	2 1/4	3 1/2	2 1/2
1 1/2	2 1/2	3 7/8	2 7/8
2	2 7/8	5	3 3/8
2 1/2	3 5/8	6 1/8	3 5/8
3	4 1/4	7 3/8	4 5/8

Non-rising spindle, screwed bonnet, and wedge of one piece guided by ribs in the body. Suitable for plumbing hot-water and heating installations.

MAXIMUM WORKING PRESSURE

HYDRAULIC

Fig. 59L 150 lbs. per sq. in.
Fig. 59E 200 lbs. per sq. in.
Fig. 59M 250 lbs. per sq. in.
Fig. 60M 175 lbs. per sq. in.
Fig. 60 250 lbs. per sq. in.
Fig. 59 300 lbs. per sq. in.

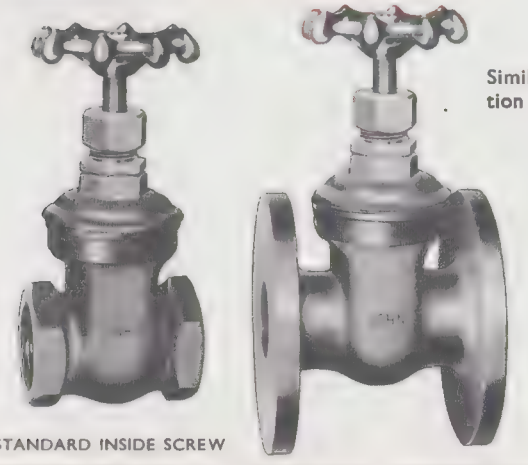


Medium Screwed | Medium Flanged

59M | **60M**

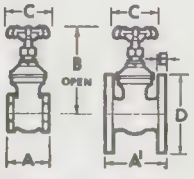
DIMENSIONS INCHES

Size	A	A1	B	C	D	E
½	2 1/8	2 3/4	4 1/16	2 1/2	3 3/4	3/8
¾	2 5/16	2 7/8	4 5/16	2 1/2	4	3/8
1	2 9/16	3 1/2	5 1/8	2 7/8	4 1/2	3/8
1 1/4	2 7/8	3 3/4	5 13/16	3 3/8	4 3/4	1/2
1 1/2	3	4	6 5/8	3 5/8	5 1/4	1/2
2	3 3/8	4 1/2	7 7/16	4 1/8	6	9/16
2 1/2	4	4 3/4	9 1/4	4 1/2	6 1/2	9/16
3	4 1/2	5 1/2	10 1/8	5 1/2	7 1/4	9/16



STANDARD INSIDE SCREW

Similar to 59M but of heavier construction for higher working pressures.



Standard Screwed | Standard Flanged

59 | **60**

DIMENSIONS INCHES

Size	A	A1	B	C	D	E
¼	1 15/16	—	3 3/4	1 7/8	—	—
⅜	1 15/16	—	3 3/4	1 7/8	—	—
½	2 3/8	2 3/4	4 1/2	2 1/2	3 3/4	3/8
¾	2 3/8	2 7/8	4 3/4	2 1/2	4	3/8
1	2 5/8	3 1/2	5 1/2	2 7/8	4 3/4	3/8
1 1/4	3 1/8	4	6 1/2	3 3/8	5 1/4	1/2
1 1/2	3 5/8	4 5/8	6 7/8	3 5/8	5 1/2	1/2
2	3 7/8	5 5/8	7 3/4	4 1/8	6 1/2	5/8
2 1/2	4 1 1/16	6 1/8	9 1/4	5 1/2	7 1/4	5/8
3	5 7/16	6 3/4	11 3/8	6	8	3/4
4	7	8 1/4	13 3/4	7	9	3/4

4" SIZES ARE FITTED WITH BOLTED COVERS

GATE VALVES — BRONZE
For Water, Oil and Gas

SPECIFICATION

FIG. 159, 160 *Bronze Body, Cover, Spindle and Valve*

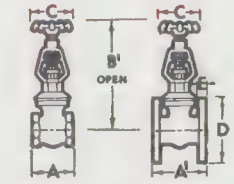
STANDARD OUTSIDE SCREW, SCREWED ENDS

Designed with an externally screwed stem and yoke which may be lubricated for prolonged wear, for Hydraulic services under arduous conditions at higher temperatures, where it is not desirable to subject the stem threads to corrosion erosion or sediment in the line fluid.

MAXIMUM WORKING PRESSURE HYDRAULIC

Fig. 159 300 lb. per sq. in.
Fig. 160 250 lb. per sq. in.

4" SIZES ARE FITTED WITH BOLTED COVERS.



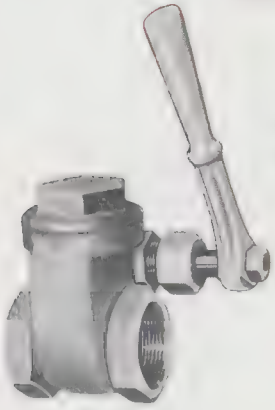
Standard Screwed — **159**

Standard Flanged — **160**

DIMENSIONS INCHES

Size	A	A1	B	C	D	E
$\frac{1}{4}$	$1\frac{5}{16}$	—	—	—	—	—
$\frac{3}{8}$	$1\frac{5}{16}$	—	—	—	—	—
$\frac{1}{2}$	$2\frac{3}{8}$	$2\frac{3}{4}$	$6\frac{3}{8}$	$2\frac{1}{2}$	$3\frac{3}{4}$	$\frac{3}{8}$
$\frac{3}{4}$	$2\frac{3}{8}$	$2\frac{7}{8}$	$7\frac{1}{4}$	$2\frac{7}{8}$	4	$\frac{3}{8}$
1	$2\frac{5}{8}$	$3\frac{1}{2}$	$8\frac{3}{8}$	$3\frac{3}{8}$	$4\frac{3}{4}$	$\frac{3}{8}$
$1\frac{1}{4}$	$3\frac{1}{8}$	4	$9\frac{7}{8}$	$3\frac{5}{8}$	$5\frac{1}{4}$	$\frac{1}{2}$
$1\frac{1}{2}$	$3\frac{5}{8}$	$4\frac{5}{8}$	$11\frac{1}{8}$	$4\frac{1}{8}$	$5\frac{1}{2}$	$\frac{1}{2}$
2	$3\frac{7}{8}$	$5\frac{5}{8}$	13	$4\frac{5}{8}$	$6\frac{1}{2}$	$\frac{5}{8}$
$2\frac{1}{2}$	$4\frac{1}{16}$	$6\frac{1}{8}$	$15\frac{1}{4}$	$5\frac{1}{2}$	$7\frac{1}{4}$	$\frac{5}{8}$
3	$5\frac{7}{16}$	$6\frac{3}{4}$	$17\frac{3}{4}$	6	8	$\frac{5}{8}$
4	7	$8\frac{1}{4}$	$22\frac{3}{8}$	7	9	$\frac{3}{4}$

GATE VALVES QUICK ACTION — BRONZE
For Water and Oil



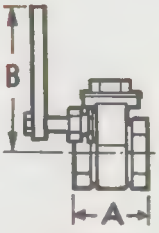
SPECIFICATION

FIG. 59QA *Bronze Body, Cover, Spindle and Valve, Cast Iron Lever*

Quick Action Gate Valves are designed primarily for use on water and oil installations where quick opening and closing is necessary.

MAXIMUM WORKING PRESSURE

Hydraulic 150 lbs. per sq. in.



Screwed Ends — **59QA**

DIMENSIONS INCHES

Size	A	B
$\frac{1}{2}$	$2\frac{1}{4}$	$4\frac{1}{4}$
$\frac{3}{4}$	$2\frac{3}{8}$	$4\frac{5}{8}$
1	$2\frac{3}{4}$	$4\frac{7}{8}$
$1\frac{1}{4}$	$3\frac{1}{8}$	6
$1\frac{1}{2}$	$3\frac{1}{2}$	$7\frac{9}{16}$
2	$4\frac{1}{8}$	10
$2\frac{1}{2}$	$4\frac{1}{2}$	10
3	$4\frac{7}{8}$	$10\frac{3}{4}$

GATE VALVES — UNION NUT BONNET — BRONZE
for Saturated Steam and Hydraulic Services

SPECIFICATION

FIG. 7910 *Gun metal body Bonnet Union Nut and Wedge*

Designed primarily for use in the petroleum industry, suitable for Steam and Hydraulic Services up to 300 lbs. per square inch, ends screwed A.P.I. (SA) or B.S.P. (SB).

MAXIMUM WORKING PRESSURES

Saturated Steam 150 lbs. p.s.i.
Cold Working 300 lbs. p.s.i.

Screwed A.P.I. Thread — **7910SA**

Screwed B.S.P. Thread — **7910SB**

DIMENSIONS INCHES

Size	A	B	C
$\frac{1}{2}$	$2\frac{3}{16}$	$5\frac{3}{8}$	$2\frac{1}{2}$
$\frac{3}{4}$	$2\frac{1}{2}$	$6\frac{1}{2}$	$2\frac{7}{8}$
1	$2\frac{13}{16}$	8	$3\frac{3}{8}$
$1\frac{1}{4}$	$3\frac{1}{8}$	$9\frac{1}{4}$	$4\frac{1}{8}$
$1\frac{1}{2}$	$3\frac{7}{16}$	$10\frac{3}{8}$	$4\frac{1}{8}$
2	$3\frac{7}{8}$	13	$4\frac{5}{8}$

GATE VALVES — CAST IRON AND CAST STEEL

For Exhaust Steam and Water

SPECIFICATION

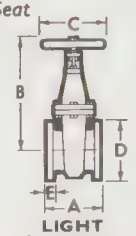
FIG. 600L	*Cast Iron Body, Bronze Spindle, Valve and Seat*
FIG. 600, 601, 602	*Cast Iron Body, Bronze Spindle, Valve and Seat*
FIG. 600A1, 601A1	*Cast Iron Body, Mild Steel Spindle, Cast Iron Valve and Seat*
FIG. 600S, 601S, 602S	*Cast Steel Body, Manganese Bronze Spindle, Bronze Valve and Seat*

INSIDE SCREWED STEM CLOCKWISE CLOSING

SECTIONAL VIEW
Fig. No. 600

OUTSIDE SCREWED STEM CLOCKWISE CLOSING

Generally used on exhaust steam and water installations, at normal temperatures. Non-Rising Spindle Valves should not be used for handling corrosive liquids, which might attack the stem and thus prevent operation of the valves.



LIGHT PATTERN

600L

DIMENSIONS INCHES

Size	A	B	C	D	E
2	5¾	9¾	5½	6	¾
2½	6¼	10¾	6	6½	¾
3	6½	12	7	7¼	¾
4	6¾	14¾	8	8½	⅞
5	7½	16½	8	10	⅞
6	8¼	19	9	11	⅞
7	9	21	10	12	1
8	9½	24¼	12	13¼	1
9	10	26	12	14½	1
10	10¾	29	14	16	1
12	12	32¾	14	18	1⅛

B.S. Table "E" Flanges.

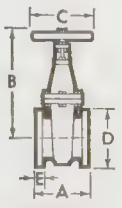
Also available with screwed ends to 6 inch size. Fig. Nos. 602 and 602S.

MAXIMUM WORKING PRESSURES HYDRAULIC

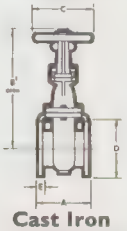
Iron. Up to 12-inch size: 200 P.S.I.
Steel. Up to 12 inch size: 300 P.S.I.
Fig. No. 600L: 175 lbs. per sq. inch.

EXHAUST STEAM
Iron and Steel. 50 lbs. per sq. in.

INSIDE SCREW



OUTSIDE SCREW



Cast Iron	Cast Iron
600	**601**
All Iron	**All Iron**
600A1	**601A1**
Cast Steel	**Cast Steel**
600S	**601S**

DIMENSIONS INCHES

Size	A	B	B1	C	D	D1*	E	E1*
1½	6½	11	13	6	5¼	5½	⅝	½
2	7	12	15¼	6‡	6	6½	¾	⅝
2½	7½	13	17	7	6½	7¼	¾	⅝
3	8	15	19	8	7¼	8	¾	⅝
3½	8½	15	21	8	8	8½	¾	¾
4	9	16½	23	9	8½	9	⅞	¾
5	10	18⅞	28	9	10	11	⅞	⅞
6	10½	20⅝	31	10	11	12	⅞	⅞
7	11	24½	35⅝	12	12	13¼	1	⅞
8	11½	25	39¼	14	13¼	14½	1	1
9	12	26¾	42½	14	14½	16	1	1
10	13	30¼	47	16	16	17	1	1
12	14¼	34	55	16	18	19¼	1⅛	1⅛

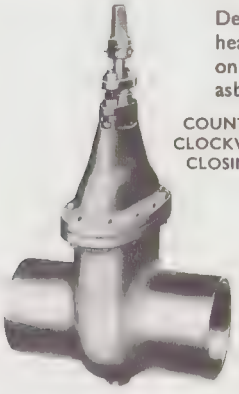
* Flanges for Fig. Nos. 600S, 601S.
‡ Fig. Nos. 601, 601A1, 601S.—7 in.

Dimensions and working pressures for larger sizes on request.

GATE VALVES — CAST IRON SPIGOT ENDS

SPECIFICATION

FIG. 605 *Cast Iron Body, Bronze Spindle, Valve and Seat*



COUNTER CLOCKWISE CLOSING

Designed for a test pressure of 800 feet head of water, this valve is approved for use on various water supply services and with asbestos cement or cast iron pipes.

DIMENSIONS INCHES

Size	A	B	D	L
3	11¾	18½	3.76	4
4	14¾	19¾	4.8	4
6	17	24½	6.98	4

Spigot

605

GATE VALVES "CLIP" PATTERN

Solid Wedge Type — Inside Screw Rising Spindle

SPECIFICATION

FIG. 590A *All iron construction*

MAXIMUM WORKING PRESSURES

Saturated Steam
150 lbs. per sq. in.

Cold Working (Non-Shock)
225 lbs. per sq. in.

590A

DIMENSIONS INCHES

Size	A
½	2¼
¾	2⅝
1	2⅞
1¼	3 5/16
1½	3 7/16
2	4 1/16
2½	4⅝
3	4 15/16
4	6 13/16

SLUICE VALVES – CAST IRON

To British Standard 1218 for Hydraulic Services

SPECIFICATION

Cast Iron Body, Manganese Bronze Spindle, Bronze Valve and Seat Rings

FLANGED ENDS

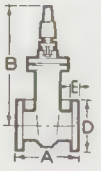
TYPICAL DESIGN FOR SIZES UP TO 6-INCH, CLASS 1 and CLASS 2.

TYPICAL DESIGN FOR, SIZES OVER 6-INCH CLASS 1 and CLASS 2.

SECTIONAL VIEW, SIZES UP TO 6-INCH, CLASS 1, CLASS 2.

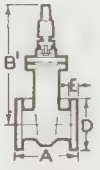
These Sluice Valves are designed to comply with British Standard 1218, Class 1 and Class 2 for test pressures of 600 and 800 feet head of water respectively. They are available with flanged, socket or spigot ends for use on water reticulation services.

FLANGED ENDS†



CLASS 1

610



CLASS 2

620

DIMENSIONS INCHES

Size	A	B	B1	D	E
3	9	17¾	19¾	7¼	¾
4	10	20¾	21¼	8½	7/8
6	11	24½	25⅛	11	7/8
8	12½	28¾	32	13¼	1
9	13	30¼	34	14½	1
10	14	32¼	36	16	1
12	15	37¼	39¼	18	1⅛

† B.S. Table "C" flanges

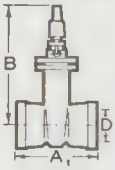
SOCKET ENDS

SPIGOT ENDS

TYPICAL DESIGNS FOR SIZES UP TO 6-INCH, CLASS 1 and CLASS 2. ABOVE 6-INCH, 2 PIECE BODIES SIMILAR TO FLANGED DESIGNS. Also available with one socket end and one flanged end, Class 2, Fig. No. 627.

SOCKET & SPIGOT ENDS

Socket Ends



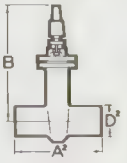
CLASS 1

613

CLASS 2

623

Spigot Ends



CLASS 1

615

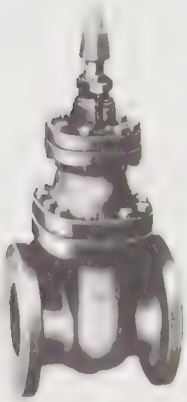
CLASS 2

625

DIMENSIONS INCHES

Size	A1	A2	B	B*	D1	D2
3	12¼	12	17¾	19¾	4.52	3.76
4	12¾	12½	20¾	21¼	5.56	4.08
6	13¼	14½	24½	25⅛	7.74	6.89
8	14¾	17	28¾	32	9.90	9.14
9	15	18	30¼	34	10.96	10.20
10	15½	19	32¼	36	12.02	11.26
12	16½	20½	37¼	39¼	14.36	13.60

* Class 2 Valves.



EXTRA HEAVY DESIGN FOR 1200 FT. HEAD TEST PRESSURE

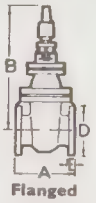
SPECIFICATION

FIG. 630 *Cast Iron Body, Manganese Bronze Spindle, Bronze Valve and Seat Rings*

These extra heavy Sluice Valves are for use on water reticulation and hydraulic services operating at a higher pressure than the British Standard Valves above. They are designed on similar lines to the B.S. 1218 Sluice Valves but with heavier sections and parts to suit a test pressure of 1200 feet head of water.

MAXIMUM WORKING PRESSURE
HYDRAULIC 1200 feet. head test.

Flanged† Also available with socket ends, Fig. No. 633 and with spigot ends, Fig. No. 635.



Flanged

630

Dimensions for Socket and Spigot Ends on request.

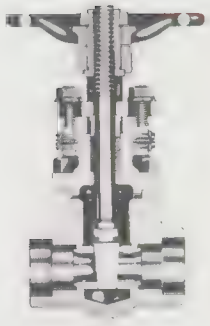
DIMENSIONS INCHES

Size	A	B	D	E
3	11	19¾	8	1¼
4	12	21¼	9	1⅜
6	13	25⅛	12	1½
8	15	32	14½	1⅝
9	16	34	16	1¾
10	16½	36	17	1⅞
12	17	39¼	19¼	2

† B.S. Table "J" Flanges

COMPACT GATE VALVES — FORGED STEEL

Complying with B.S.2995 Primary Service Rating 800 P.S.I. at 850° Fah.



SECTIONAL VIEW
Fig. No. 7080W

PRESSURE TEMPERATURE RATINGS

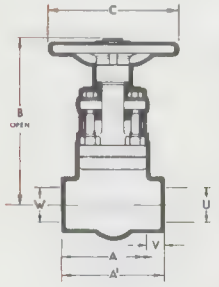
CARBON STEEL FORGINGS

B.S.2995:1966 Class 800, Appendix "B"

°Fah.*	P.S.I.‡	°Fah.*	P.S.I.‡
100	2000	650	1430
150	1970	700	1305
200	1940	750	1180
250	1915	800	1015
300	1895	850	800†
350	1875	875	725
400	1850	900	600
450	1810	925	520
500	1735	950	425
550	1640	975	330
600	1540	1000	235

* Service Temperature
‡ Maximum non-shock service pressure
† Primary service pressure

Designed primarily for the Petroleum Industry, "Compact" design, bolted bonnet, outside screw stem, forged carbon steel wedge gate valves are manufactured and tested in strict accordance with British Standard 3808:1964.



DIMENSIONS INCHES

Size	A	A1	B	C	U	V	W*
½	3⅛	3⅛	5¾	3	.855	½	½
¾	3¼	3¼	6	3	1.065	½	¾
1	3⅝	3⅝	7⅛	4 1/16	1.330	½	1
1½	4½	4½	10½	4¾	1.915	½	1½
2	4½	4½	10¾	4¾	2.406	⅝	2

*Screwed A.P.I. or B.S.P. (Taper) Thead

Screwed A.P.I. Thread	Screwed B.S.P. Thread	A.S.A. Socket Weld Ends
7080SA	7080SB	7080W

PARALLEL SLIDE VALVES CAST IRON AND CAST STEEL

For Steam and Feed Water

SPECIFICATION

FIG. 316 *Cast Iron Body, Bronze Valve and Seat*

FIG. 316S *Cast Steel Body, Nickel Alloy Valve and Seat*

SECTIONAL VIEW

Constructed to provide a full flow of steam or Boiler Feed Water. There is no wedging action of the discs, thus obviating distortion and the consequent difficulty of opening. The sliding action prevents sediment becoming lodged between the discs and the seats. The non-rising spindle in the open position, is enclosed by a hollow spindle attached to the valve.

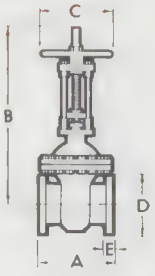
MAXIMUM WORKING PRESSURES

CAST IRON

STEAM. Max. Temp. 400 Fah. 150 lbs. per sq. in.
OIL, COLD WATER (Static) 300 lbs. per sq. in.

CAST STEEL

STEAM. Max. Temp. 650° Fah. 355 lbs. per sq. in.
OIL, COLD WATER (Static) 500 lbs. per sq. in.



Cast Iron **316**

Cast Steel **316S**

DIMENSIONS INCHES

Size	A	B	C	D	E*	E1	K†
1½	7	14 1/16	8	5½	⅝	⅞	6⅜
2	10	16¼	8	6½	¾	1	7½
2½	10¾	20 3/16	9	7¼	¾	1	9
3	11½	21 5/16	10	8	¾	1¼	9⅞
3½	12½	24 7/16	11	8½	⅞	1¼	10½
4	13	25 7/16	11	9	⅞	1⅜	11⅛
5	15	31¾	13	11	1	1½	12¾
6	15½	34 7/16	15	12	1	1½	14¼
7	17	38 3/16	15	13¼	1	1¼	15¾
8	17½	44½	17	14½	1⅛	1¼	17¼
9	18	50	18	16	1⅛	1⅜	18¼
10	18	56	20	17	1⅛	1⅜	20
12	20	67¼	22	19¼	1¼	1½	23
14	20	71½	22	21¾	1⅜	1⅝	26¼
15	20	75¾	22	22¾	1⅜	1⅝	26¼
16	22	82	22	24	1⅜	1¾	28½
18	24	91	28	26½	1½	1⅞	29⅝

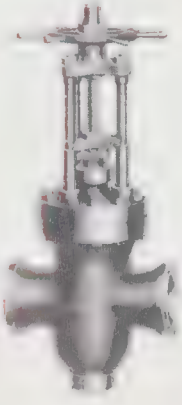
† K—Diameter of body-bonnet flange.
* E—Fig. No. 316. Cast Iron B.S. Table "F" Flanges.
E1—Fig. No. 316S. Cast Steel. B.S. Table "H" Flanges B.S. Table "J" to 6" size.

MAXIMUM WORKING PRESSURES

STEAM
Fig. No. 316SH
Max. Temp. 800° Fah. 450 lbs. per sq in.
Fig. No. 316HP, 316HPV
Max. Temp. 800° Fah. 900 lbs. per sq. in.
OIL, COLD WATER (Static)
Fig. No. 316SH
900 lbs. per sq. in.
Fig. No. 316HP, HPV
1800 lbs. per sq. in.

High Pressure **316HP**

High Pressure Venturi Design **316HPV**



MAXIMUM WORKING PRESSURES

(Table "T" Flanges)
PRIMARY SERVICE RATING
CARBON STEEL
1400 lbs. per sq. in. — 800° Fah.
ALLOY STEEL
1400 lbs. per sq. in.— 900° Fah.
COLD WORKING CARBON AND ALLOY STEELS
2800 lbs. per sq. in.

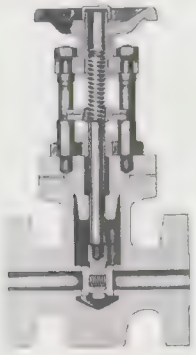
Pressure Held **3161 0**

PARALLEL SLIDE VALVES — FORGED STEEL

For Steam, Feed Water, Oil and Air

SPECIFICATION

FIG. 1001 *Forged Steel Body, Stainless Steel Spindle and Valve, Hardfaced Seat*



SECTIONAL VIEW

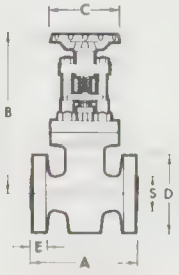
Forged Steel Parallel Slide Valves are used as standard Bye-passes on High Pressure Cast Steel Parallel Slide Valves, and for installations where Body Release Fittings are necessary to relieve internal pressure built up through re-evaporation of the condensate in the Body of the main Valve.

DIMENSIONS INCHES

Size	A	B	C	D	E	S*	S1
½	6	10⅛	5	5	⅞	2¼	2½
¾	7	10½	5	5	⅞	2¼	2½
1	8	11¼	6	5½	1	2½	2 11/16
1¼	9½	14	7	5¾	1⅛	2¾	3⅛

*Table "S"—S. Table "J" "K" and "R"—S1.

Dimensions given above are for Valves with Table "S" flanges. Table "J" "K" and "R" flange diameters (D) are as shown in British Standard Tables. Other dimensions remain the same.

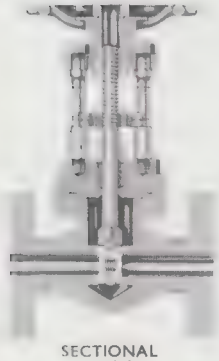


1001

PRESSURE TEMPERATURE RATINGS

CARBON STEEL VALVES with flanges to B.S. 10:1962

Temp. ° Fah.	B.S. FLANGE TABLE J	K	R	S
	Pressure P.S.I.			
0.450	700	900	1200	1800
500	650	835	1115	1670
550	600	770	1030	1545
600	550	705	945	1415
650	500	645	855	1285
700	450	580	770	1155
750	400	515	685	1030
800	350	450	600	900
825	300	390	520	780
850	225	325	435	655
Test Pressure	1050	1350	1800	2700



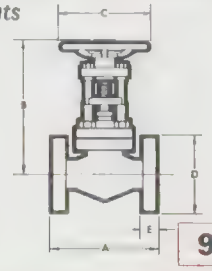
SECTIONAL VIEW

SPECIFICATION

FIG. 941 *Forged Steel Body, Flanges and Seats, Stainless Steel Spindle, Nickel Alloy Valve, Stellite Seats*

Primary Service Rating is 450 p.s.i. at 800° Fah. and in accordance with Australian Standard B190-1964 may be used at higher pressures and lower temperatures up to 900 p.s.i. at 450° Fah.

Flanges and seats are integrally forged enabling Stellite faces to be deposited prior to welding into body.



941

DIMENSIONS INCHES

Size	A	B	C	D	E
½	5¾	7¼	4⅛	4½	¾
¾	6¼	8	4⅛	4½	¾
1	7	9½	4¾	5	⅞

Dimensions given are for valves with "K" flanges.

PARALLEL SLIDE VALVES — FORGED ALLOY STEEL

For Steam, Feed Water, Oil and Air

SPECIFICATION

FIG. 2001 *Forged Alloy Steel Body, Stainless Steel Spindle, Cobalide Faced Valve and Seat*

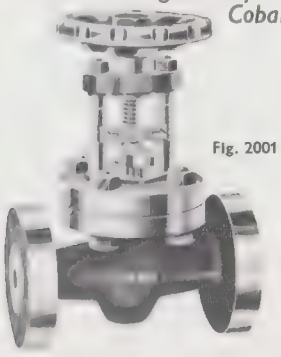
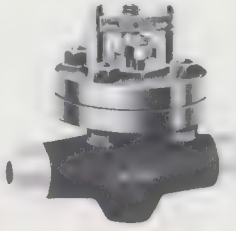
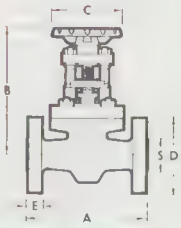


Fig. 2001



2001 BW



2001

DIMENSIONS INCHES

Size	A	B	C	D	E	S
½	9	9⅞	6	5½	1	2½
¾	9	9⅞	6	5½	1	2½
1	10	10⅝	7	5¾	1⅛	3
1¼	11½	13½	8	6¼	1¼	3¼
1½	12½	14½	9	6¾	1⅜	3½

PRESSURE TEMPERATURE RATINGS

FOR FLANGES TO BS. 10.1962 TABLE "T"

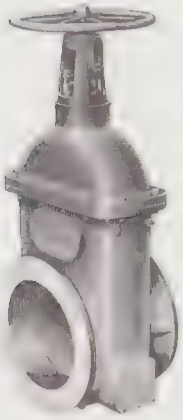
CARB. STEEL °Fah.	CARB. STEEL P.S.I.	ALLOY STEEL °Fah.	ALLOY STEEL P.S.I.
0-450	2800	0-450	2800
500	2600	500	2645
550	2400	550	2490
600	2200	600	2335
650	2000	650	2180
700	1800	700	2020
750	1600	750	1865
800	1400	800	1710
825	1210	825	1635
850	1025	850	1555
875	835	875	1480
900	645	900	1400
—	—	925	1085
—	—	950	770
—	—	975	455
Test Pressure			4250 (lbf/m²)

GAS VALVES – CAST IRON

SPECIFICATION

FIG. 810, 811 *Cast Iron Body, Mild Steel Spindle, Cast Iron Valve and Seat*

VERTICAL

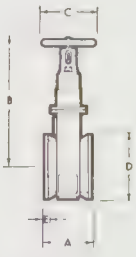


SECTIONAL VIEW

Gas works installation, normally used on works mains, coke oven and purifier connections in a vertical position, but work equally well when installed at any angle or in a horizontal position. They may be fitted with floor columns, extension spindles or chain wheel controls where necessary.

MAXIMUM WORKING PRESSURE

20 lbs. per sq. in.



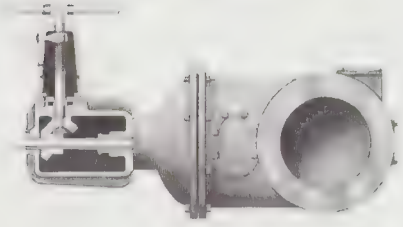
VERTICAL
B.S. Table "A" Flanges

810

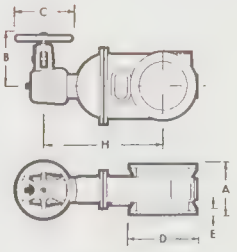
DIMENSIONS INCHES

Size	A	B	C	D	E
3	10¼	20½	8	7¼	1 1/16
4	11½	20½	9	8½	¾
5	11½	23	9	10	¾
6	11¾	24½	10	11	13/16
7	11¾	29¼	12	12	13/16
8	12¼	30	14	13¼	⅞
9	13½	34	14	14½	⅞
10	13¾	35	16	16	15/16
12	16	37	16	18	15/16
14	16¼	45	16	20¾	1
15	17	46¼	24	21¾	1
16	18	48	24	22¾	1 1/16
18	18	49¼	24	25¼	1 1/16
20	20	53¾	24	27¾	1⅛

HORIZONTAL



Horizontal Gas Valves have the same operating mechanism and uses as Vertical Gas Valves, but are normally installed in a horizontal position, and controlled through bevel gears by a horizontal handwheel. They may also be installed at an angle or with the valve and handwheel in a vertical position.



HORIZONTAL
B.S. Table "A" Flanges

811

DIMENSIONS INCHES

Size	A	B	C	D	E	H
3	10¼	11½	8	7¼	1 1/16	19
4	11½	11½	9	8½	¾	19
5	11½	11¾	9	10	¾	21¼
6	11¾	11¾	10	11	13/16	22¾
7	11¾	12¼	12	12	13/16	25
8	12¼	12¼	14	13¼	⅞	25⅛
9	13½	12½	14	14½	⅞	27¼
10	13¾	14⅜	16	16	15/16	29¾
12	16	15	16	18	15/16	34¼
14	16¼	15½	16	20¾	1	37⅜
15	17	16	24	21¾	1	40½
16	18	16¼	24	22¾	1 1/16	42¾
18	18	16½	24	25¼	1 1/16	45½
20	20	19¾	24	27¾	1⅛	49½

STANDARD
604

HEAVY
604H

FLOOR COLUMNS

Several types of cast iron floor columns are available with or without pointers and graduated indicator plates. Plain or capstan handwheels may be used.

FLANGE DRILLING

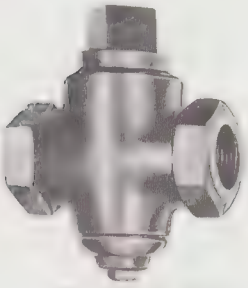
Normally, flanged valves are supplied with undrilled flanges, but if ordered to be drilled they are drilled to British Standard Tables unless otherwise specified.

COCKS — CAST IRON

For Non-shock Cold Water and Oil

SPECIFICATION
FIG. 496C1, 515C1, 517C1, 523C1, 525C1 *Cast Iron throughout*

These cocks are of neat design. They are fitted with accurately ground plugs having liberal ports to ensure efficient operation.



PLUG COCK
Screwed ends

MAXIMUM WORKING PRESSURE
Hydraulic 150 lbs. per sq. in.

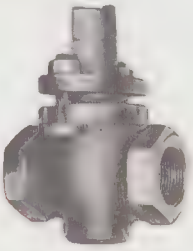
496C1

Size	½	¾	1	1¼	1½	2	2½	3	4

PACKED GLAND COCK
Screwed ends

MAXIMUM WORKING PRESSURE
Hydraulic 150 lbs. per sq. in.

515C1



Size	½	¾	1	1¼	1½	2	2½	3	4

PACKED GLAND COCK
Flanged ends

MAXIMUM WORKING PRESSURE
Hydraulic 180 lbs. per sq. in.

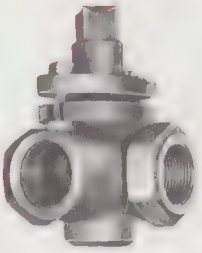
517C1

Size	1	1¼	1½	2	2½	3	4

THREE WAY PACKED GLAND COCK
Screwed ends

MAXIMUM WORKING PRESSURE
Hydraulic 180 lbs. per sq. in.

523C1



Size	1	1¼	1½	2	2½	3	4

SPRING LOADED INVERTED PLUG COCK

SPECIFICATION
Cast Iron Body and Cap, Bronze Plug

Size	½	¾	1	1¼	1½	2

MAXIMUM WORKING PRESSURE
Air 125 lbs. per sq. in.

GF510

THREE WAY PACKED GLAND COCK
Flanged ends

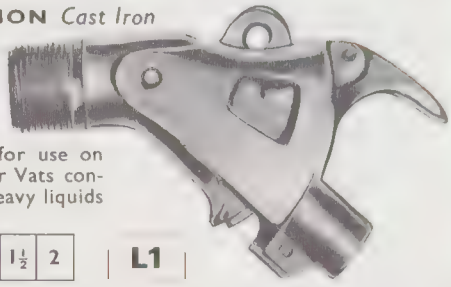
MAXIMUM WORKING PRESSURE
Hydraulic 180 lbs. per sq. in.

525C1

Size	1	1¼	1½	2	2½	3	4

TREACLE GATE — CAST IRON

SPECIFICATION *Cast Iron*



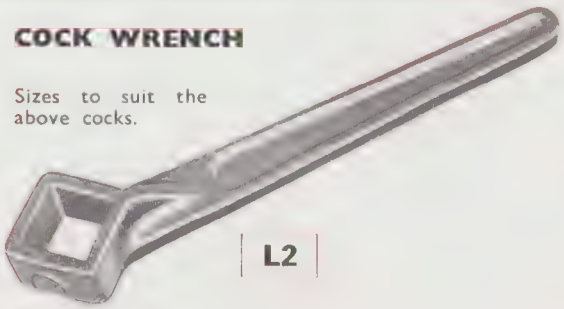
Suitable for use on Drums or Vats containing heavy liquids

Size	¾	1	1¼	1½	2

L1

COCK WRENCH

Sizes to suit the above cocks.



L2

COCKS — BRONZE
For Steam, Water and Oil

AVAILABLE WITH MALE AND FEMALE ENDS (FIG. 3)

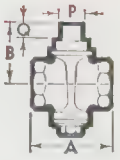
DEEP BARREL PLUG COCKS

SPECIFICATION

FIG. 3, 3A *Bronze Body & Plug*

For use on steam and hydraulic installations. The plug of each cock is individually ground ensuring smooth operation and perfect seating.

MAXIMUM WORKING PRESSURES
Steam 150 lbs. per sq. in.
Water and Oil 250 lbs. per sq. in.



Standard Screwed Ends

3A

DIMENSIONS INCHES

Size	A	B	P	Q
¼	1¾	1⅛	7/16	5/16
⅜	1⅞	1 5/16	9/16	5/16
½	2⅝	2⅛	½	½
¾	3	2¼	¾	⅝
1	3⅜	2⅜	¾	11/16
1¼	4	2¾	1 1/16	¾
1½	4⅝	3¾	1 3/16	1 1/16
2	6	4¼	1⅛	1 3/16
2½	7	4⅝	1¼	1 1/16
3	7¾	4½	1⅝	1 1/16
4	11	7½	2	2

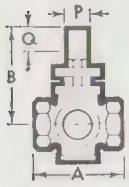
AVAILABLE WITH "L" OR "T" PORTS

3-WAY PACKED GLAND COCKS

SPECIFICATION

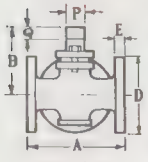
FIG. 56, 56A *Bronze Body, Plug and Gland*

Similar in construction and use to Fig. 36 but in 3-way design.



Three-way Screwed Ends L Port Plugs

56



Standard Flanged Ends

56A

DIMENSIONS INCHES

Size	A	B	D	E	P	Q
½	2½	2¾	—	—	7/16	⅝
¾	3⅛	2¾	—	—	9/16	⅝
1	3¼	3⅝	—	—	⅝	¾
1¼	4⅝	4 3/16	—	—	¾	⅞
1½	5¼	4⅜	—	—	1 3/16	1 3/16
2	5¼	4¾	—	—	⅞	1
2½	7	6 1/16	—	—	1	1
3	7¾	6 9/16	—	—	1¼	1 3/16
4	11	8 13/16	—	—	2	1¾
1	4	3¾	4¾	⅜	⅝	¾
1¼	4¼	3¾	5¼	½	¾	1
1½	5½	6	5½	½	1 3/16	1
2	6	6⅜	6½	⅝	1	1⅛
2½	7	6⅝	7¼	⅝	1¼	1 7/16
3	7¾	7¾	8	⅝	1¼	1 15/16
4	11	8¾	9	¾	2	1¾

AVAILABLE WITH MALE AND FEMALE ENDS (FIG. 37)

PACKED GLAND COCKS

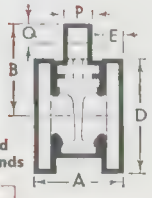
SPECIFICATION

FIG. 36, 37, 29 *Bronze Body, Plug and Gland*

Similar in application to the deep barrel type. It has the added feature of a packed gland.

Standard Screwed Ends

36

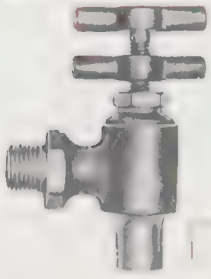


Standard Flanged Ends

29

DIMENSIONS INCHES

Size	A	B	D	E	P	Q
¼	1¾	2 1/16	—	—	5/16	⅜
⅜	1¾	2 1/16	—	—	5/16	⅜
½	2½	2⅞	—	—	½	11/16
¾	3	3	—	—	9/16	⅝
1	3⅜	3 7/16	—	—	¾	⅝
1¼	4	3⅞	—	—	¾	11/16
1½	4	4 1/16	—	—	1 3/16	⅞
2	5	4¾	—	—	⅞	1 5/16
2½	6½	6 3/16	—	—	1	1
3	7¾	7	—	—	1¼	1¼
4	11	9¼	—	—	2	1¾
½	2⅝	2 13/16	3¾	⅜	7/16	1 3/16
¾	3	2 11/16	4	⅜	½	⅝
1	3¾	3½	4¾	⅜	¾	⅝
1¼	4⅛	3 15/16	5¼	½	¾	1 5/16
1½	4	3 15/16	5½	½	¾	1 5/16
2	5½	4⅝	6½	⅝	1 5/16	1 5/16
2½	6¼	6¼	7¼	⅝	1	1
3	7¾	6¾	8	⅝	1¼	1¼
3½	7¾	7½	8½	¾	1 9/16	1¾
4	11	8 13/16	9	¾	2	1¾



70

SNIFTING VALVES — BRONZE
For Air

SPECIFICATION

FIG. 70 *Bronze throughout*

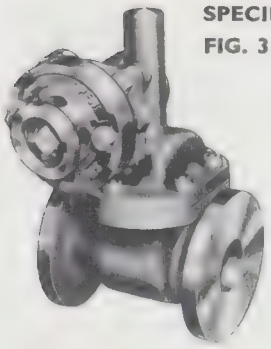
For installations on pumps and containers. Permits an intake of air which can be controlled by the winged adjusting screw and lock nut.

MAXIMUM WORKING PRESSURE
200 lbs. per sq. in.

Size Screwed B.S.P			
¼	⅜	½	¾

PARALLEL SLIDE BLOW-OFF VALVE — BRONZE

For Steam

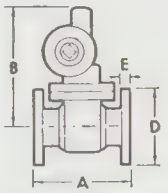


SPECIFICATION

FIG. 315 *Bronze Body, Cover, Rack, Pinion Shaft and Gland, Stainless Steel Valve Discs and Seats*

Installed on all types of Boilers as blow-down or blow-off Valves. For low-medium pressures where corrosive action is encountered. Incorporates all the advantages of a Parallel Slide Valve. Operated by a rack and pinion movement to give full opening with a half turn of the key.

MAXIMUM WORKING PRESSURE
Steam 250 lbs. per sq. in. Up to 500°F.



DIMENSIONS INCHES

Size	A	B	D	E
1½	7	8½	5½	1 1/16
2	8	10	6½	¾
2½	9	11⅜	7¼	¾
3	10	13⅝	8	⅞

Box Keys to Suit can be Supplied

Flanged Ends

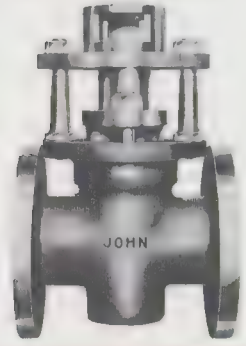
315

BLOW-OFF COCKS — BRONZE

For Saturated Steam

SPECIFICATION

FIG. 31 *Bronze Body, Gland, Plug and Locking Guard*



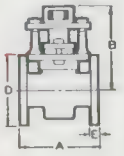
MAXIMUM WORKING PRESSURE
150 lbs. per sq. in.

DIMENSIONS INCHES

Size	A	B	D	E
1½	6¼	7	5½	½
2	7¾	8¼	6½	⅝
2½	8⅛	8¾	7¼	⅝

31

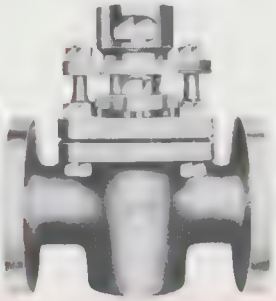
Without Locking Guard



32

SPECIFICATION

FIG. 314 *Bronze Body, Gland, Plug and Locking Guard*



MAXIMUM WORKING PRESSURE
250 lbs. per sq. in.

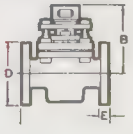
Also available without locking guard (Fig. No. 313) or with single gland and no locking guard (Fig. No. 312)

DIMENSIONS INCHES

Size	A	B	D	E
1½	6½	7 5/16	5½	1 1/16
2	7⅞	8 3/16	6½	¾
2½	10	8 3/16	7¼	¾
3	10⅛	10	8	⅞

314

Without Locking Guard



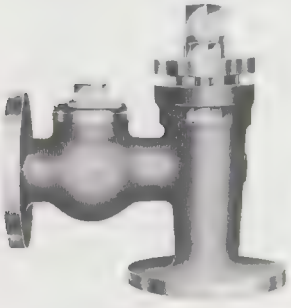
313

COMBINED COCK AND CHECK VALVES — BRONZE

For Saturated Steam

SPECIFICATION

FIG. 52, 52A *Bronze Body and Valve*

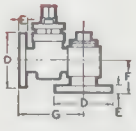


COLONIAL TYPE HORIZONTAL INLET
Fig. 52A

For Boiler Feed installations. Machined Valve and ground Plug ensure efficient operation.

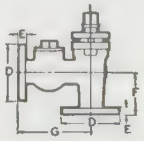
VERTICAL INLET TO CHECK VALVE
Fig. 52

MAXIMUM WORKING PRESSURE
Steam 150 lbs. per sq. in. Up to 365°F.



52

Vertical inlet to check valve



52A

Vertical inlet to Cock

DIMENSIONS INCHES

Size	D	E	F	G
½	3¾	⅜	1¾	4¼
¾	4	⅜	2½	4¾
1	4¾	⅜	2¾	5½
1¼	5¼	½	2⅞	5½
1½	5½	½	3	5½
2	6½	⅝	3½	6⅞
2½	7¼	⅝	4	8½

Size	D	E	F	G
1	4¾	⅜	2⅜	4¼
1¼	5¼	½	3⅜	5¾
1½	5½	½	3½	6
2	6½	⅝	4¼	7

PET COCKS — BRONZE

For Steam, Water, Air and Oil

SPECIFICATION *Bronze throughout*

15

ROUND BARREL

STEAM. Max. Temp. 340° Fah. 100 lbs. per sq. in.

15

STRAIGHT

SIZES (B.S.P.)	¼	⅜	½	¾

16

STRAIGHT, WITH UNION

SIZES (B.S.P.)	¼	⅜	½	¾
TAILPIPE 26 T.P.I.	⅜	⅜	⅜	½

17

17

BENT

SIZES (B.S.P.)	¼	⅜	½	¾

18

BENT, WITH UNION

SIZES (B.S.P.)	¼	⅜	½	¾
TAILPIPE 26 T.P.I.	⅜	⅜	⅜	⅜

19

PACKED GLAND

STEAM. Max. Temp. 365° Fah. 150 lbs. per sq. in.

19

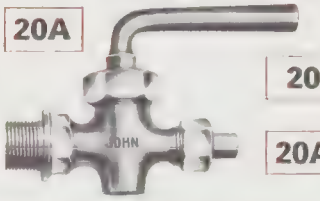
BENT

SIZES (B.S.P.)	¼	⅜	½	¾

19A

BENT, WITH UNION

SIZES (B.S.P.)	¼	⅜	½	¾
TAILPIPE 26 T.P.I.	⅜	⅜	½	¾



20A

20

STRAIGHT

SIZES (B.S.P.)	¼	⅜	½	¾

20A

STRAIGHT, WITH UNION

SIZES (B.S.P.)	¼	⅜	½	¾
TAILPIPE 26 T.P.I.	⅜	⅜	½	¾

GAUGE COCKS — BRONZE

73

ROUND BARREL

STEAM. Max. Temp. 365 Fah. 150 lbs. per sq. in.

SCREWED, FEMALE ENDS

SIZES (B.S.P.)	¼	⅜	½

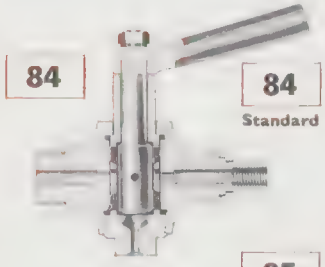
73A

SCREWED, M. & F. ENDS, WITH UNION

SIZES (B.S.P.)	¼	⅜	½
TAILPIPE 26 T.P.I.	¼	⅜	⅜

SLEEVE PACKED COCKS

STANDARD: 180 lbs. per sq. in.
MASSIVE: 250 lbs. per sq. in.



84

84
Standard

STRAIGHT, WITH UNION

SIZES (B.S.P.)	½	¾
TAILPIPE 26 T.P.I.	⅜	½

SECTIONAL VIEW

85
Massive

STRAIGHT, WITH UNION

SIZES (B.S.P.)		¾
TAILPIPE 26 T.P.I.		½

WHISTLE VALVES BRONZE

For Steam or Air

SPECIFICATION

FIG. FA240 *Bronze Body, Valve, Lever and Spring.*

FA240

MAXIMUM WORKING PRESSURE
150 lbs. per sq. in.

Size	½	¾	1

WHISTLES ORGAN TYPE

For Steam or Air

SPECIFICATION

FIG. FA222 *Bronze throughout*

FA222

Size	½	¾	1
Diameter	1½	1½	2
Length	10	10	14

WATER GAUGE MOUNTINGS

For installation on low pressure tanks and urns.

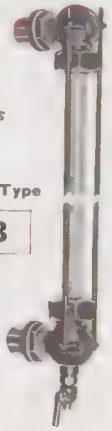
Size ½" B.S.P.
Fitted
with ⅝ Diameter Gauge Glass
½" Size Available

Self Cleaning

L2

Elbow Type

L3



WATER GAUGE MOUNTINGS — BRONZE

For Steam Boilers

SLEEVE PACKED

SPECIFICATION

FIG. 147, 148, 145, 146 *Bronze throughout*

For higher working pressures. Plugs revolve in a bearing of asbestos fibre which prevents excessive wear and gives perfect seating. Available in both right and left hand sets.

MAXIMUM WORKING PRESSURES
Massive Steam 250 lbs. per sq. in.
Standard Steam 200 lbs. per sq. in.

Illustration shows Right Hand Set.

PACKED GLAND

SPECIFICATION

FIG. 39, 41 *Bronze throughout*

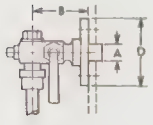
For medium pressure boilers. Fitted with ground plugs and packed glands. Available in both right and left hand sets.

MAXIMUM WORKING PRESSURE
Steam 150 lbs. per sq. in

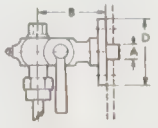
Illustration shows Right Hand Set.

DIMENSIONS INCHES

Size*	A†	B‡	Size*	A†	B‡	D
Fig. No. 145			Fig. No. 146			
½	½	3	½	¾	3¼	3½
⅝	¾	3½	⅝	1	3¾	4½
¾	¾	3½	¾	1	3¾	4½
Fig. No. 147			Fig. No. 148			
¾	1	3¾	¾	1	4⅝	4½



Standard Screwed — **145**



Standard Flanged — **146**

Massive Screwed — **147**

Massive Flanged — **148**

ROUND BARREL

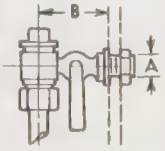
SPECIFICATION

FIG. 42 *Bronze throughout*

For low pressure boilers. Fitted with ground plugs. Available in both right and left hand sets.

MAXIMUM WORKING PRESSURE
Steam 80 lbs. per sq. in.

Illustration shows left hand set



Standard Screwed — **42**

DIMENSIONS INCHES

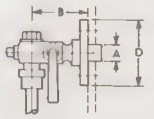
Size*	A†	B‡
⅜	⅜	2⅛
½	½	2¼
⅝	¾	3
¾	¾	3

* Diam. of glass. Gauges for ⅜" glasses made to order only.
† Screwed B.S.P. Thread or diameter of spigot.
‡ Tube centre to face of collar or flange.

DIMENSIONS INCHES

Size*	A†	B‡	Size*	A†	B‡	D
⅜	⅜	2½	⅜	½	3	3¼
½	½	2⅞	½	¾	3⅜	3½
⅝	¾	3¼	⅝	1	3¾	4½
¾	¾	3¼	¾	1	3¾	4½

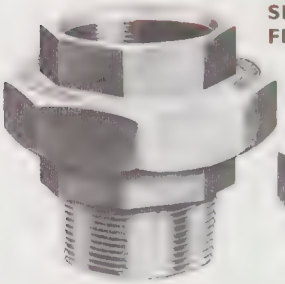
Standard Screwed — **39**



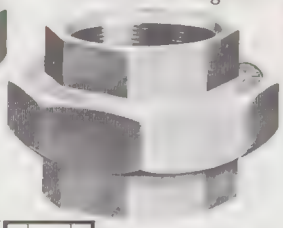
Standard Flanged — **41**

UNIONS — BRONZE

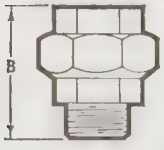
For Saturated Steam, Water, Air and Oil



SPECIFICATION
FIG. 9A, 10
Bronze throughout



MAXIMUM WORKING PRESSURE
Steam 150 lbs. per sq. in. Up to 400 F.
Water, Air and Oil 250 lbs. per sq. in.



Male and Female Ends — **9A**

Female Ends — **10**

Screwed Standard B.S.P. Taper Thread, Machined Tapered Seats.

DIMENSIONS INCHES

Size	B	B1
¼	1⅞	1 5/16
⅜	2 1/16	1 9/16
½	2 5/16	1¾
¾	2 9/16	1 15/16
1	2⅞	2⅛
1¼	3⅛	2⅜
1½	3⅜	2⅝
2	4	3⅛
2½	4¾	3½
3	5 1/16	3 11/16

*Screwed B.S.P. Taper Thread

GAUGE GLASS PROTECTORS

SPECIFICATION

Bronze Ends and Rods. Plate Glass

Available in sizes to suit all types of Boiler Gauge mountings.

49

SAFETY VALVES, SPRING LOADED — BRONZE
For Steam and Air

SPECIFICATION

FIG. 28, 27 *Bronze Body, Cap and Valve, Steel Spring*

Suitable for installations where the free escape of steam or air is permissible. Fitted with an easing lever to raise the valve from its seat. Springs can be supplied to suit any desired blow-off pressure.

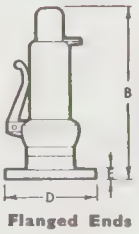
MAXIMUM WORKING PRESSURE
150 lbs. per sq. in. Up to 500°F.

DIMENSIONS INCHES

Screwed Ends

28

Size	B
½	5¾
¾	6
1	7⅞
1¼	9⅛
1½	9⅞
2	10¾
2½	13
3	14⅞



Flanged Ends

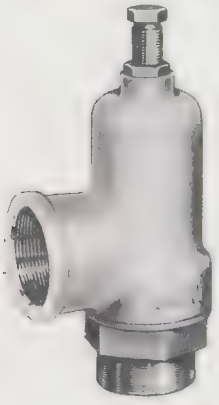
27

Size	B	D	E
1	8⅝	4¾	¾
1¼	9½	5¼	½
1½	10¾	5½	½
2	12½	6¼	⅝
2½	16⅝	7¼	⅝
3	18	8	⅝

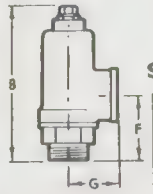
RELIEF VALVES, SPRING LOADED — BRONZE
For Steam, Water, Air and Oil

SPECIFICATION

FIG. 68 *Bronze Body, Steel Spring*



Particularly suitable for liquids having a closed outlet. Springs can be supplied to suit any desired blow-off pressure.



Screwed Ends

68

DIMENSIONS INCHES

Size	B	F	G
½	4⅝	2 1/16	1 5/16
¾	5	2¼	1 9/16
1	6¾	2 11/16	1¾
1¼	7⅝	3 3/16	2
1½	8⅜	3½	2⅝
2	9	4	2¾
2½	11	4⅝	3¼
3	12½	5¼	3¾

MAXIMUM WORKING PRESSURE
150 lbs. per sq. in. Up to 500 F.

SPECIFICATION

FIG. 67 *Bronze Base, Valve, Spring Case, Steel Spring*

Suitable for installations where the free escape of Steam or Air is permissible. Valve adjusted by single Adjusting Screw.

MAXIMUM WORKING PRESSURE
150 lbs. per sq. in. Up to 500°F.

DIMENSIONS INCHES

Open Lantern

67

Size	B
½	5 5/16
¾	6¼
1	7¼
1¼	8¾
1½	9⅜
2	10 1/16
2½	14⅞
3	18½

SPECIFICATION **FIG. 69** *Bronze Base and Valve, Steel Pillars and Spring.*

Valve is adjusted by two nuts on the mild steel Pillars screwed into Bronze Base.

MAXIMUM WORKING PRESSURE
150 lbs. per sq. in. Up to 500°F.

Open Spring

69

DIMENSIONS INCHES

Size	B
½	4¾
¾	6¼
1	7⅜
1¼	7 13/16
1½	10 7/16
2	11¾
2½	13 5/16
3	16 9/16

AIR RELIEF VALVES

SPECIFICATION

FIG. 723 *Bronze Body, Stainless Steel Disc and Spring*

The valve, with stainless steel spring, is normally supplied set at 100 P.S.I. but can be adjusted within the pressure range 80 P.S.I. to 120 P.S.I. Springs are available for pressure ranges to 250 P.S.I. maximum.

DIMENSIONS INCHES

Size	B
⅜	3 5/16
½	3 5/16

*B.S.P. Taper thread end connection.

723

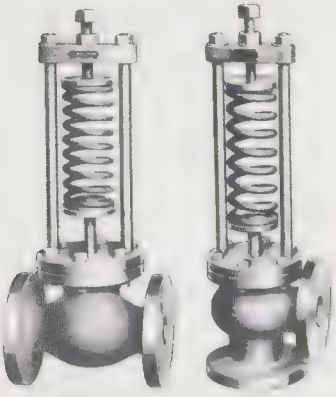
RELIEF VALVES, SPRING LOADED — BRONZE

For Steam, Water, Air and Oil

SPECIFICATION

FIG. 74, 75 *Bronze Body, Valve and Seat, Steel Spring*

74N, 75N *Bronze Body, Nickel Alloy Valve and Seat, Steel Spring*



Straight Angle

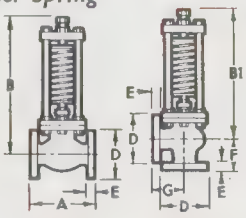
Direct Spring Loaded Type. Springs can be supplied to suit any desired blow-off pressure.

MAXIMUM WORKING PRESSURES

BRONZE
Max. Temp. 500°F.
250 lbs. per sq. in.

CAST IRON
Max. 400°Fah. 150 lbs. per sq. in.

CAST STEEL
Max. 750°Fah. 250 lbs. per sq. in.



Straight Angle

74 **75**

DIMENSIONS INCHES

Size	A	B	B1	D	E	F	G
½	6	8¾	8¼	4½	½	3	3
¾	6	10⅜	9¾	4½	½	3	3
1	6⅜	11	10¼	4¾	9/16	3¼	3¼
1¼	7⅛	12 7/16	11½	5¼	11/16	3 9/16	3 9/16
1½	7⅜	15⅜	14⅜	5½	11/16	3 11/16	3 11/16
2	8½	16	15	6½	¾	4¼	4¼
2½	9¼	21⅛	19½	7¼	¾	4⅝	5
3	10½	22½	20½	8	⅞	5½	5½

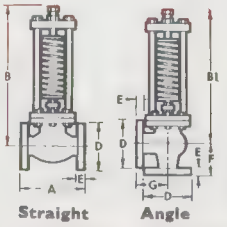
CAST IRON AND CAST STEEL

SPECIFICATION

FIG. 680, 681 *Cast Iron Body, Bronze Valve and Seat, Steel Spring*

FIG. 680S, 681S *Cast Steel Body, Nickel Alloy Valve and Seat, Steel Spring*

For protection of reduced pressure installations, following a reducing valve, this direct spring loaded type of valve is suitable for Steam, Water, Oil and Air services.



Straight Angle

680 **681**

680S **681S**

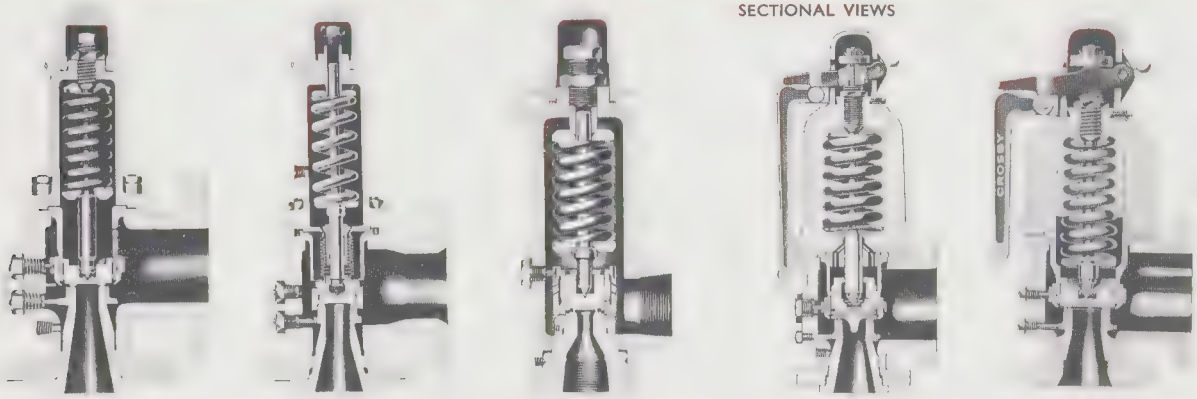
DIMENSIONS INCHES

Size	A	B	B1	D	E	F	G
1½	7⅜	15⅜	14⅜	5½	11/16	3 11/16	3 11/16
2	8½	16	15	6½	¾	4¼	4¼
2½	9¼	21⅛	19½	7¼	¾	4⅝	5
3	10½	22½	20½	8	⅞	5½	5½
3½	11½	25¼	23⅛	8½	⅞	5¾	5¾
4	13	25⅞	23 3/16	9	1	6	6½
5	15	28¾	26¼	11	1⅛	7	7½
6	17	36½	33¼	12	1⅛	8	8½
7	19	35⅛	31¾	13¼	1¼	8½	9
8	21	42¼	38	14½	1¼	9½	10
9	23	43¾	38½	16	1⅜	11	11
10	25	48	42¼	17	1⅜	12	12

CROSBY RELIEF AND SAFETY RELIEF VALVES

Conforming to A.S.B. 190-1964 Valves, Water Gauges and other fittings for Boilers and Unfired Pressure Vessels, also A.S.M.E. Boiler and Pressure Vessel Code Section 1 and 8.

SECTIONAL VIEWS



STYLE JO STYLE JB STYLES JMB & JMBU STYLES HS & HSA STYLE HO

Styles JO and JB: High capacity full nozzle Safety Relief Valves for low and high pressure and temperatures from —400°F. to 1000°F. Cast carbon steel body and bonnet to 800°F. Cast alloy steel over 800°F. Stainless steel nozzle, disk and trim.

Style JW: Semi-nozzle Safety Relief Valves. Cast iron body and bonnet, stainless steel semi-nozzle and disk. Suitable for pressure to 300 lbs. per sq. in. at 250°F. 150 lbs. per sq. in. at 400°F. Orifice sizes from "F" to "R", inlet sizes 1½"-6".

Styles JMB and JMBU: For general service on air, gas, vapour and liquids. Not suitable for steam boilers. Style JMBU meets requirements of ASB190-1964, also ASME, Code Section 8, inlet sizes ¾", 1", 1½" and 2".

Styles HS and HSA: Cast steel and alloy steel bodies with certified discharge capacity, for saturated and superheated steam services up to 900 lbs. per sq. in. and temperatures to 1020°F. Standard and oversize inlets from 1" to 8".

Style HO: Cast iron body, top guided disk, reaction type "pop" action and "Crosby" 2 ring blowdown control for saturated steam to 150 lbs. sq. in.

INJECTORS AUTOMATIC — PENBERTHY TYPE

For Steam Boilers

L5

SPECIFICATION *Bronze throughout*

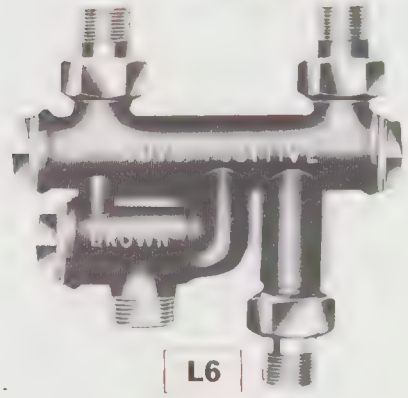
Designed and built to give lasting and dependable service. A separate brochure is available giving complete details of their use and care.

CAPACITIES

Size	Horse Power Based on Ordinary Tube Boiler	Horse Power Based on 30 lb. Water per H.P. per hour	Pipe Connections	Capacity in Gallons per Hour 60 to 110 lbs. Steam Pressure 1 to 3 feet lift	
				Max.	Min.
A	8 to 16	10 to 20	½"	135	70
B	17 „ 32	22 „ 45	¾"	260	140
C	40 „ 65	45 „ 80	1"	476	250
D	50 „ 100	60 „ 135	1¼"	800	425
E	100 „ 180	125 „ 235	1½"	1,400	740

INJECTORS AUTO. POSITIVE — PENBERTHY TYPE

For Steam Boilers



L6

SPECIFICATION
Bronze throughout

Designed to provide a range of steam pressures and hot water ability, beyond an injector of the automatic class. A separate brochure is available giving complete details of their use and care.

CAPACITIES

Size	Pipe Connections			Capacity in Gal. per hour 75 to 125 lbs. Steam 3 ft. lift		Horse Power Allowing 7½ to 8 gals. per H.P. per Hour
	Steam	Suction	Delivery	Max.	Min.	
113	½	½	½	200	60	7 to 25
115	¾	¾	¾	400	130	16 „ 50
117	1	1	1	675	225	28 „ 85
119	1¼	1¼	1¼	1,125	375	47 „ 145
121	1½	1½	1½	2,000	700	87 „ 265

EJECTORS — PENBERTHY TYPE

Steam Operated

L7

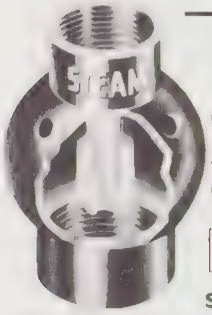
SPECIFICATION *Bronze throughout*

Has sufficient power to elevate one foot per each 1¼ to 1⅜ lbs. per sq. in. of steam. Simple in construction, these ejectors have no moving parts, and are silent in operation. Delivery and steam jets are replaceable after prolonged use.

SIZE NUMBER	1	2	3	4	5	6	7
Pipe Connection Steam	⅜"	½"	¾"	1"	1"	1¼"	1½"
Pipe Connection Suction & Delivery	½"	¾"	1"	1¼"	1½"	2"	2½"
CAPACITY PER HOUR IN GALLONS							
40 lbs. to 65 lbs. Steam 3 ft. Lift	240	500	840	1350	1950	3500	5700
20 lbs. to 40 lbs. or 65 lbs. to 100 lbs. Steam	235	450	700	1300	1850	3000	4350
40 lbs. to 65 lbs. Steam 50 ft. Elevation	120	250	420	650	975	1750	2500
40 lbs. to 65 lbs. Steam 25 ft. „	180	375	625	950	1450	2600	3750
VERTICAL ELEVATIONS IN FEET							
40 lbs. to 75 lbs. Steam	23	25	25	25	25	25	25
25 lbs. to 40 lbs. or 75 lbs. to 100 lbs.	20	22	22	22	22	22	22
STEAM CAPACITIES IN POUNDS PER MINUTE							
Steam Pressure 25 lbs.	.4	.8	1.3	2.2	3.2	6.3	8.5
40 lbs.	.6	1.2	1.8	3.0	4.4	8.9	12.0
80 lbs.	1.0	2.0	3.2	5.0	7.6	15.0	20.0
100 lbs.	1.3	2.4	3.8	6.0	9.0	18.0	24.0

NOISELESS WATER HEATERS — PENBERTHY TYPE

Steam Operated



For heating water or other fluids by the use of live steam. Silent in operation. Maximum efficiency can be obtained by fitting a 10″ or 12″ length of pipe to the discharge end of heater.

L8

Size	G	H	J	K	L	M	N
Steam Pipe Connection	$\frac{3}{8}$″	$\frac{1}{2}$″	$\frac{3}{4}$″	1″	$1\frac{1}{4}$″	$1\frac{1}{2}$″	2″
Discharge ,,	$\frac{1}{2}$″	1″	1″	$1\frac{1}{4}$″	$1\frac{1}{2}$″	2″	$2\frac{1}{2}$″

STEAM AND WATER MIXER

Applications cleaning floor and wall surfaces in food processing and other factories and premises, and for cleaning equipment where steam, water or detergent is acceptable for the purpose.
Temperature of the water is easily adjusted by variation of steam applied to the mixer, up to near boiling point. The steam not only heats the water but also acts as the propulsion medium, especially where main pressure water is not available.

L9

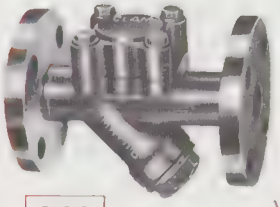
Sizes: $\frac{1}{2}$ — $\frac{3}{4}$ — 1 in.

"CLAM" THERMODYNAMIC STEAM TRAPS

Mk. I Medium Capacity Screwed Pattern with Strainer

L10

Gunmetal Body
Working Pressure
5 to 250 p.s.i



Mk. VIIB Flanged Pattern with Strainer

L11

Working Pressure
5 to 250 p.s.i.
B.S.P. Sizes: $\frac{1}{2}$ — $\frac{3}{4}$ — 1 in.

Also Available in
Forged Carbon Steel
Working Pressure up to 1000 p.s.i.

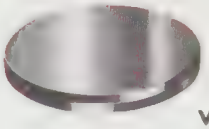
Mk. VIIB Screwed Pattern with Strainer

L12

Working Pressure
5 to 200 p.s.i.
B.S.P. Sizes: $\frac{1}{2}$ — $\frac{3}{4}$ — 1 in.

Also Available in
Forged Carbon Steel

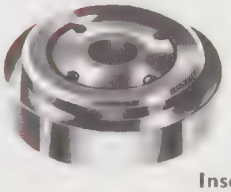
Also Available
Mk. VIIC Bolted Cover Screwed or Flanged
Mk. XB Flanged Pattern
Working Pressure 5 to 300 p.s.i.



LOW COST REPLACEMENT PARTS

Valve

Cover Gasket

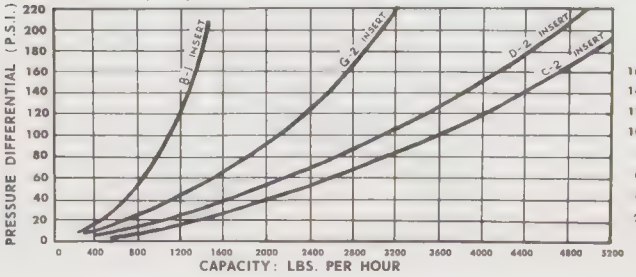


Insert

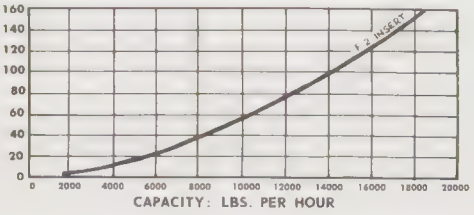
Inner and Outer Body Gasket

CLAM STEAM TRAPS Capacity Graphs

Inserts.
B1, Mk. I ; G2, D2 or C2, Mk. VIIB; & VIIC



F2 Mk. XB.

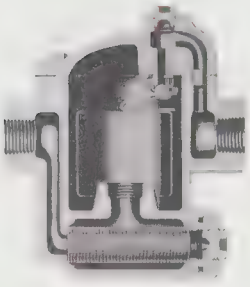


TRAP	INSERT
Mk I	B-1
Mk VII B	G-2
	D-2
Mk VII C	C-2
Mk X B	F-2

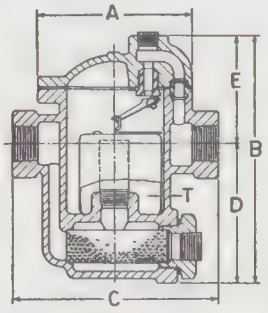
SIDE INLET STEAM TRAPS — CAST IRON

Pressure Range 0 to 250 psig;
Capacities to 6800 lbs/hr; for Draining Low and Medium Pressure Piping and Equipment

STRAINER TYPE

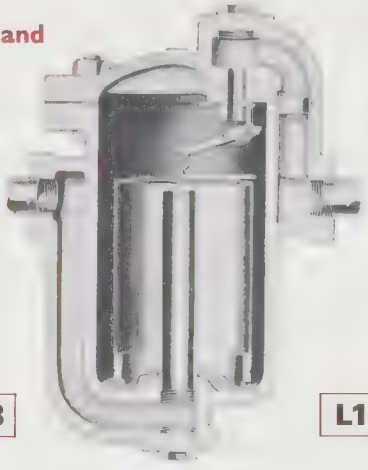


No. 883



No. 880-883

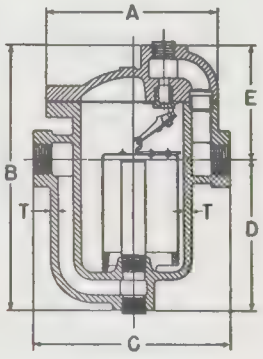
L13



No. 814

REGULAR SIDE INLET, SIDE OUTLET TRAPS

L14



No. 800-814

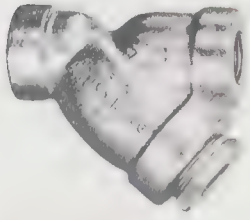
PHYSICAL DATA — SIDE INLET TRAPS

Trap Size	With Strainers				Without Strainers				
	No. 880	No. 881	No. 882	No. 883	No. 800	No. 811	No. 812	No. 813	No. 814
Pipe Connections	½" or ¾"	½" or ¾"	½" or ¾"	¾", 1" or 1¼"	½" or ¾"	½" or ¾"	½" or ¾"	¾" or 1"	1" or 1¼"
Strainer Blow-Down Conn.	⅜"	⅜"	⅜"	½"	—	—	—	—	—
"A" (Flange Diameter)	3¾"	3¾"	5⅝"	7"	3¾"	3¾"	5⅝"	7"	8"
"B" (Height)	5 1⅜6"	7 1⅛"	9⅜"	12⅜"	5 1⅛"	6⅞"	8⅞"	11¾"	13⅝"
"C" (Face-to-Face)	5"	5"	6½"	7⅞"	5"	5"	6½"	7¾"	9"
"D" (Bottom to C/L Inlet)	3 3⅛6"	4 3⅛6"	5¾"	7⅜"	2¾"	4¼"	5"	7 1⅛2"	7 1 3⅛6"
"T" (Body Wall thickness)	5⅛2"	5⅛2"	¼"	5⅛2"	5⅛2"	5⅛2"	¼"	5⅛2"	⅜"
Number of Bolts	6	6	6	6	6	6	6	6	8
Diameter of Bolts	¼"	¼"	⅜"	½"	¼"	¼"	⅜"	½"	½"
Weight	5½ lbs.	6 lbs.	16 lbs.	30 lbs.	5 lbs.	6 lbs.	15 lbs.	27 lbs.	45 lbs.
Maximum Design Pressure	**250	250	250 lbs.	250	**250	250	250	250	250
Continuous Discharge Capacity in lbs. of Water per hour at pressure differential indicated. Pressure, lbs. 5	450	830	1600	2900	450	830	1600	2900	4800
10	560	950	1900	3500	560	950	1900	3500	5800
15	640	1060	2100	3900	640	1060	2100	3900	6500
20	690	880	1800	3500	690	880	1800	3500	6000
25	460	950	1900	3800	460	950	1900	3800	6500
30	500	1000	2050	4000	500	1000	2050	4000	6800
40	550	770	1700	3800	550	770	1700	3800	5800
50	580	840	1900	4100	580	840	1900	4100	6300
60	635	900	2000	4400	635	900	2000	4400	6800
70	660	950	2200	3800	660	950	2200	3800	6000
80	690	800	1650	4000	690	800	1650	4000	6400
100	640	860	1800	3600	640	860	1800	3600	6200
125	680	950	2000	3900	680	950	2000	3900	6700
150	570	810	1500	3500	570	810	1500	3500	5700
200	—	860	1600	3200	—	860	1600	3200	5300
250	—	760	1300	3500	—	760	1300	3500	5700

**Maximum Operating Pressure: 150 lbs.

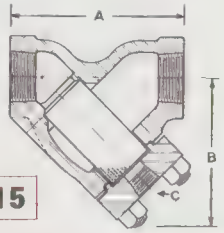
"ARMSTRONG" Y-TYPE STRAINERS

SPECIFICATION *Body Cast Iron, Strainer Stainless Steel*



B S.P. Sizes ¼" to 3"
2½" and 3" Sizes have bolted screen retainer plate

Also Available
Flanged Pattern Sizes 2"—12"



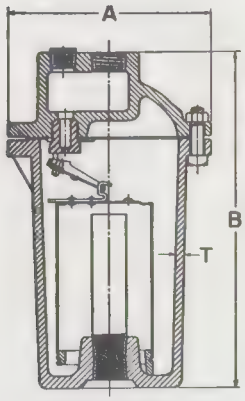
L15

MAXIMUM WORKING PRESSURES
Steam 250 lbs. per sq. in.
Cold Non-Shock 400 lbs. per sq. in.

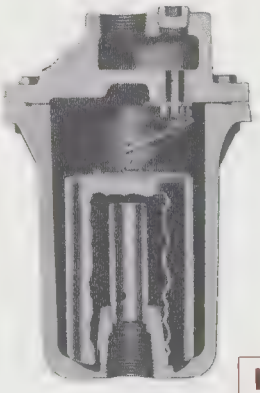
DIMENSIONS INCHES

Size	A	B	C
¼	3	2⅛	⅜
⅜	3¾	2⅝	⅜
½	3¾	2⅝	⅜
¾	4¼	3	½
1	5	3⅜	½
1¼	5½	3⅞	½
1½	6 5⁄16	4½	½
2	7½	5¼	½
2½	8½	6½	¾
3	10½	8⅛	1¼

BOTTOM INLET STEAM TRAPS — CAST IRON



No. 211-216
Cast Semi-steel Traps.



No. 216

L16

Pressure Range 0 to 250 psig; Capacities to 20,000 lbs/hr; for Draining Low and Medium Pressure Piping and Equipment

Armstrong bottom-inlet cast iron traps are the least expensive Armstrong traps for any given capacity range. The 211, 212, 213 and 214 sizes are identical in capacity to the 811, 812, 813 and 814.
In addition, two bottom-inlet sizes — the 215 and 216 — are available for higher capacity ranges — up to 20,000 lbs. of water per hour.

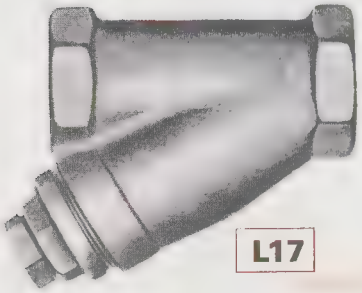
PHYSICAL DATA — BOTTOM INLET TRAPS

Trap Size		No. 211	No. 212	No. 213	No. 214	No. 215	No. 216
Pipe Connections		½"	½" or ¾"	½", ¾" or 1"	1" or 1¼"	1", 1¼" or 1½"	1½" or 2"
"A" Flange Diameter		4¼"	5¼"	6⅜"	7½"	8½"	10⅜
"B" Height		6⅜"	8"	10¾"	12½"	14⅜"	17"
"T" Body Wall Thickness		3/16"	¼"	5/32"	⅜"	⅜"	7/16"
Number of Bolts		6	8	6	8	8	12
Diameter of Bolts		5/16"	5/16"	⅜"	⅜"	½"	½"
Weight		6 lbs.	12 lbs.	21 lbs.	35 lbs.	47 lbs.	78 lbs.
Maximum Pressure		250	250	250	250	250	250
Continuous Discharge Capacity in lbs. of Water per Hour at pressure differential indicated.	Pressure, lbs. 5	830	1600	2900	4800	7600	14500
	10	950	1900	3500	5800	9000	17300
	15	1060	2100	3900	6500	10000	19200
	20	880	1800	3500	6000	8500	18500
	25	950	1900	3800	6500	9200	20000
	30	1000	2050	4000	6800	9800	18000
	40	770	1700	3800	5800	8300	20000
	50	840	1900	4100	6300	9000	18200
	60	900	2000	4400	6800	9500	19800
	70	950	2200	3800	6000	9200	18300
	80	800	1650	4000	6400	9700	19000
	100	860	1800	3600	6200	10400	18000
	125	950	2000	3900	6700	10900	20000
	150	810	1500	3500	5700	9500	18500
	200	860	1600	3200	5300	9200	17500
	250	760	1300	3500	5700	7000	19000

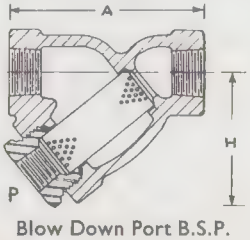
"GOOLD" KLEENFLO Y-TYPE LINE STRAINER

SPECIFICATION *Gunmetal Body, Stainless Steel renewable Strainer Cartridges*

For Removal of Rust, Scale and Foreign Matter From Pipe Work



L17



Blow Down Port B.S.P.

	SCREWED B.S.P.						FLANGED B.S.T.H.					
Size	½	¾	1	1¼	1½	2	1¼	1½	2	2½	3	4
A	3 5/16	3¾	4⅛	4⅛	6	6	6⅝	8	8⅝	10½	12	14½
H	2¾	3¼	3½	3⅝	5	5	3⅝	5	5	7¾	8⅝	11½
P	⅜	⅜	⅜	½	½	½	½	½	½	½	½	½

PRESSURE REDUCING VALVES

"GOOLD FOSTER" TYPE 39Y3

For Steam, Air, Liquids and Gases

SPECIFICATION *Gunmetal Body, Stainless Steel, Gunmetal or Neoprene Valve as required.*

Designed and developed for applications calling for an inexpensive small capacity Regulator, where very accurate control is desired on such applications as glass blowing machinery, bottling machinery, plating tanks, gas or oil firing, etc.
It is suitable for initial pressures up to 300 p.s.i. and reduced pressures from 3/125 p.s.i.

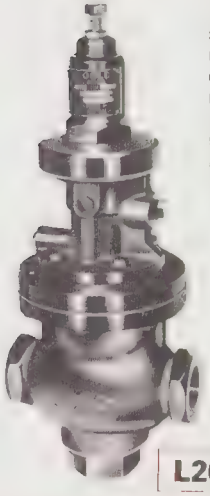
SPRINGS AVAILABLE
3-20, 5-40, 10-60, 20-80, 60-125
SIZES B.S.P. ½" ¾"

L18

"GOOLD FOSTER" TYPE 50G2

For Steam

SPECIFICATION *Gunmetal Bodies ½" to 2½" Gunmetal or Cast Iron Bodies 3" to 4" Stainless Steel Valve and Seat.*



"GOOLD FOSTER" Type 50G2 designed to give accurate control from minimum to maximum capacity and dead-end service with a maximum pressure rise of 1% of reduced pressure setting; is not affected by variations of the inlet pressure within the limits of the minimum differential.

L20

DIMENSIONS INCHES

SCREWED CONNECTIONS

Size	A	B	C
½	5	10 7/8	3½
¾	5	10 7/8	3½
1	5½	11⅛	3½
1¼	6	11¼	3¾
1½	6½	12⅜	4½
2	7½	13	5

FLANGED CONNECTIONS B.S.T. "H"

Size	A	B	C
2	8 5/16	13	5
2½	11	14¼	5½
3	12	14½	5⅞
4	14	15⅞	6⅝

WORKING PRESSURES

INITIAL
Up to 300 p.s.i.
REDUCED
Up to 280 p.s.i.

SPRINGS AVAILABLE

½" to 4 p.s.i.	3 to 15 p.s.i.
15 to 50 p.s.i.	20 to 100 p.s.i.
20 to 150 p.s.i.	40 to 200 p.s.i.
100 to 275 p.s.i.	

The Auxiliary Valve unit assembly is interchangeable in All Sizes.

"GOOLD" TYPE 177

For Steam, Air or Non-corrosive Fluids

SPECIFICATION *Gunmetal Body Stainless Steel Valve and Seats*

L19

DIMENSIONS INCHES

SCREWED CONNECTIONS

Size	A	B	C	D
½	5	3⅝	12 7/8	6
¾	5	3⅝	12 7/8	6
1	5	3⅝	12 7/8	6
1¼	6	5⅛	13¼	7⅜
1½	6	5⅛	13¼	7⅜
2	6 1/16	5	21	8⅞

FLANGED CONNECTIONS B.S.T. "H"

Size	A	B	C	D
2	9⅛	5	21	8⅞
2½	9⅝	7 5/16	23 3/16	8⅞
3	9⅝	7 5/16	23 3/16	8⅞

WORKING PRESSURES

INITIAL Up to 200 p.s.i.
REDUCED Up to 60 p.s.i.

"W & J" TYPE

For Steam, Water and Air

SPECIFICATION *Bronze Body, Valve, Stainless Steel Diaphragm, Steel Springs*

Controlled by a diaphragm and two springs, one which is adjustable for altering the downstream pressure. The absence of glands ensures free operation of the valve under all conditions without sticking or chattering.
Separate brochures are available showing rated flows, care and use.

L21

WORKING PRESSURE

Steam and Water

INITIAL
Up to 200 lbs. per sq. in.
REDUCED
Up to 160 lbs. per sq. in.

Air

INITIAL
Up to 400 lbs. per sq. in.
REDUCED
Up to 150 lbs. per sq. in.

Sizes	½"	¾"	1"	1¼"	1½"	2"

PRESSURE, HYDRAULIC, VACUUM AND COMPOUND GAUGES

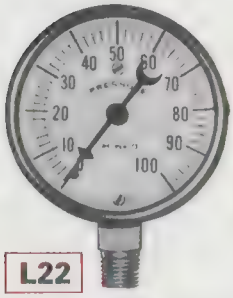
STANDARD GAUGES for General Industrial Applications on Steam, Water, Air and other Pressure Media Non Injurious to Copper Alloys.

When Ordering Please Advise:

1. SIZE — diameter of dial
2. RANGE — advisably double normal working pressure
3. MOUNTING — (a) Direct — no Flange; (b) Surface — Back Flange; (c) Flush or Panel — Front Flange
4. B.S.P. — Connecting size
5. CASE MATERIAL — Brass, Steel or Cast Iron
6. SERVICE REQUIRED — Air, Oil, Hydraulic, Ammonia, Acid, etc.

Non-Standard or Special Purpose Gauges can be supplied.

PRESSURE GAUGE Brass Case



L22

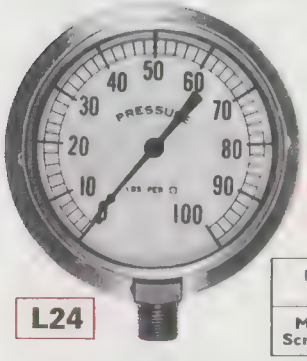
AVAILABLE
Direct Mounting (Illustrated)
Surface Mounting
Flush Mounting

PRESSURES—10 15 30 50 60 100 150 160 200 300 400 500 600 800 1000 1600 2000 3000 lbs. per sq. in.

Diameter of Dial	2″	2½″	3″
Male Shank Screwed B.S.P.	⅛″	¼″	¼″

2″ Surface Mounted only ¼″ B.S.P.

PRESSURE GAUGE Brass Case



L24

AVAILABLE
Surface Mounting Only

PRESSURES — 15 30 50 60 100 150 160 200 300 400 500 600 800 1000 lbs. per sq. in.

Diameter of Dial	8″	10″	12″
Male Shank Screwed B.S.P.	½″	½″	½″

HYDRAULIC GAUGE Cast Iron Case

L26

AVAILABLE
Surface Mounting
Direct Mounting (Illustrated)
Flush Mounting

PRESSURES — 1000 1600 2000 3000 4000 5000 6000 10000 16000 lbs. per sq. in.

Diameter of Dial	4″	6″
Male Shank Screwed B.S.P.	⅜″	½″

Flush mounting ⅜″ B.S.P. connection only

PRESSURE GAUGE Brass Case

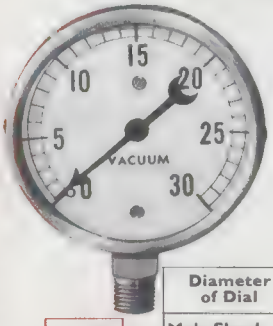
L23

AVAILABLE
Surface Mounting
Direct Mounting (Illustrated)
Flush Mounting

PRESSURES — 15 30 50 60 100 150 160 200 300 400 500 600 800 1000 lbs. per sq. in.

Diameter of Dial	4″	6″
Male Shank Screwed B.S.P.	⅜″	⅜″

VACUUM GAUGE



L25

AVAILABLE
Sizes: 2″, 2½″, 3″ Brass Case
Direct Mounting
Surface Mounting
Flush Mounting
Sizes: 4″, 6″ Brass Case
Direct Mounting
Surface Mounting
Flush Mounting
Sizes: 8″, 10″, 12″ Brass Case
Surface Mounting Only
For Vacuums to 30 inches.

Diameter of Dial	2″	2½″	3″	4″	6″	8″	10″	12″
Male Shank Screwed B.S.P.	⅛″	¼″	¼″	⅜″	⅜″	½″	½″	½″

COMPOUND GAUGE Brass Case

L27

AVAILABLE
Direct Mounting
Surface Mounting
Flush Mounting

VACUUMS to 30 inches

PRESSURES — 15 30 60 100 150 200 lbs. per sq. in.

Diameter of Dial	3″	4″	6″
Male Shank Screwed B.S.P.	¼″	⅜″	⅜″

RAST 'GAUGE SAVER' SEALED SNUBBER

L28

B.S.P. Connection ⅛″, ¼″, ⅜″, ½″

PRESSURES — Brass, Maximum 2000 p.s.i.

Note: Not recommended for use with Vacuum or Compound Gauges.

PIPE FITTINGS — MALLEABLE IRON

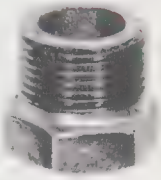
Galvanised or Black

BACKNUT

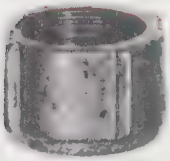
BEND M & F

BEND F & F

BEND M & F 45°



BUSH



CAP

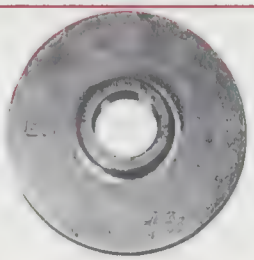
CROSS

ELBOW

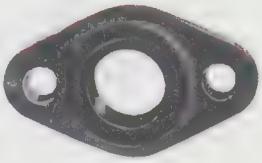
ELBOW M & F

ELBOW 3-WAY

ELBOW REDUCING



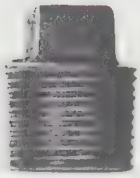
FLANGE



OVAL FLANGE

HEXAGON NIPPLE

HEXAGON NIPPLE REDUCING

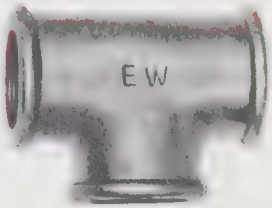


PLUG

RECESS PLUG

SOCKET

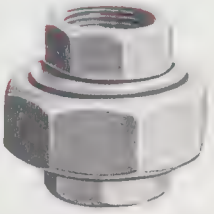
REDUCING SOCKET



TEE

REDUCING TEE

TEE 4-WAY



UNION ORDINARY & BRASS SEATED

UNION M & F BRASS SEATED

All Fittings Individually tested to 300 lb. per sq. inch Hydraulic

MALLEABLE IRON — MANUFACTURED SIZE RANGE • B.S.P. SIZES

ADAPTORS					1″ x ¼″			2″ x 1¼″					
								2″ x 1½″					
								2″ x 2″					
BACKNUTS	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		
BENDS, M. & F.	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		6″
BENDS, F. & F.			½″	¾″	1″	1¼″	1½″	2″	2½″	3″			
BENDS, M. & F., 45°			½″	¾″	1″	1¼″	1½″	2″					
BUSHES	¼″ x ⅛″	⅜″ x ¼″	½″ x ¼″	¾″ x ¼″	1″ x ¼″	1¼″ x ½″	1½″ x ½″	2″ x ½″	2½″ x 1″	3″ x 1″	4″ x 2″		
			½″ x ⅜″	¾″ x ⅜″	1″ x ⅜″	1¼″ x ¾″	1½″ x ¾″	2″ x ¾″	2½″ x 1¼″	3″ x 1¼″	4″ x 2½″		6″ x 3″
				¾″ x ½″	1″ x ½″	1¼″ x 1″	1½″ x 1″	2″ x 1″	2½″ x 1½″	3″ x 1½″	4″ x 3″		6″ x 4″
					1″ x ¾″		1½″ x 1¼″	2″ x 1¼″	2½″ x 2″	3″ x 2″			
								2″ x 1½″		3″ x 2½″			
										3½″ x 3″			
CAPS		⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		
CROSSES		⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″			
ELBOWS, F. & F.	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		6″
ELBOWS, RED.			½″ x ⅜″	¾″ x ⅜″	1″ x ½″	1¼″ x 1″	1½″ x 1¼″	2″ x 1″					
				¾″ x ½″	1″ x ¾″		1½″ x 1¼″	2″ x 1¼″					
								2″ x 1½″					
ELBOWS, M. & F.	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		
ELBOWS, 3-way			½″	¾″	1″	1¼″							
ELBOWS, M. & F., 45°					1″		1½″						
ELBOWS, F. & F., 45°					1″		1½″						
FLANGES	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″	5″	6″
FLANGES, OVAL			½″	¾″	1″	1¼″	1½″	2″					
HEX. NIPPLES	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		6″
HEX. NIPPLES, RED.			½″ x ⅜″	¾″ x ⅜″	1″ x ½″	1¼″ x ¾″	1½″ x ¾″	2″ x 1″	2½″ x 2″	3″ x 2″	4″ x 3″		
				¾″ x ½″	1″ x ¾″	1¼″ x 1″	1½″ x 1″	2″ x 1¼″		3″ x 2½″			
							1½″ x 1¼″	2″ x 1½″					
PLUGS	⅛″ ¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3½″	4″		
SOCKETS	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		
SOCKETS, RED.		⅜″ ¼″	½″ x ¼″	¾″ x ⅜″	1″ x ½″	1¼″ x ½″	1½″ x ½″	2″ x 1½″	2½″ x 1½″	3″ x 1¼″			
			½″ x ⅜″	¾″ x ½″	1″ x ¾″	1¼″ x ¾″	1½″ x ¾″	2″ x ¾″	2½″ x 2″	3″ x 1½″			
						1¼″ x 1″	1½″ x 1″	2″ x 1″		3″ x 2″			
							1½″ x 1¼″	2″ x 1¼″		3″ x 2½″			
								2″ x 1½″					
TEES	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		6″
TEES, RED.			½″ x ⅜″	¾″ x ⅜″	1″ x ½″	1¼″ x ½″	1½″ x ½″	2″ x ½″	2½″ x 2″	3″ x 1½″			
			½″ x ¾″	¾″ x ½″	1″ x ¾″	1¼″ x ¾″	1½″ x ¾″	2″ x ¾″		3″ x 2″			
				¾″ x ½″ x ½″	1″ x ¾″ x ¾″	1¼″ x 1″	1½″ x 1″	2″ x 1″		3″ x 2½″	4″ x 2″		
				¾″ x ½″ x ¾″	1″ x ¾″ x 1″	1¼″ x 1″ x ½″	1½″ x 1″ x 1¼″	2″ x 1¼″			4″ x 2½″		
				¾″ x 1″	1″ x 1¼″	1¼″ x 1″ x 1″	1½″ x 1¼″	2″ x 1¼″ x 1½″					
					1″ x 1½″	1¼″ x 1″ x 1¼″	1½″ x 1½″ x 2″	2″ x 1½″					
						1¼″ x 1″ x 1½″		2″ x 1½″ x 2″					
						1¼″ x 1½″							
TEE, 4-way			½″	¾″	1″								
UNIONS, F.S.	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″	4″		
UNIONS, B.S., F. & F.	¼″	⅜″	½″	¾″	1″	1¼″	1½″	2″	2½″	3″			
UNIONS, B.S., M. & F.				¾″	1″		1½″						
UNIONS, 5° DEFLECTION					1″	1¼″	1½″						

TELEPHONE: 648 8501

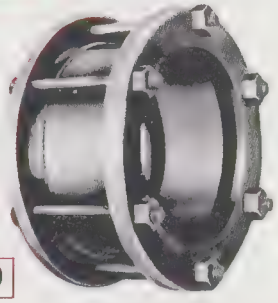
DRESSER-MALCO COUPLINGS AND PIPE REPAIR PRODUCTS

STYLE 129. COUPLINGS FOR STEEL PIPE

For "SLEEVING-IN" new sections of plain-end pipe

B.S.P. Size ⅜" to 72"

L29



STYLE 360. PIPE REPAIR CLAMP

B.S.P. Size	Clamp Width
3"	6"
4"	6"
4"	12"
6"	6"
6"	12"
9"	6"
9"	12"
12"	6"
12"	12"

L31

STYLE 106. SADDLE TEES

For Water and Gas Branch Connections off Steel Pipe

Approved by water and gas authorities throughout Australia.

L33

SIZES AVAILABLE—

½" × ½"	¾" × ¾"	¾" × ½"	1" × 1"	1" × ¾"

For branch connections above size 1", use Style 91 Service Saddles.

STYLE 65. COMPRESSION FITTINGS

COUPLING

TEE

ELBOW

L30

B.S.P. Size ¼" to 2"

STYLE 91. SERVICE SADDLES

For Permanent Water and Gas Service Connections off Steel, Cast Iron and Asbestos Cement Pipes

Approved by water and gas authorities throughout Australia

L34

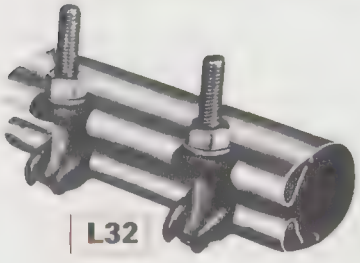
ASBESTOS CEMENT—CAST-IRON PIPE

Size	Tapping range
3"	½"-1½"
4"	½"-1½"
6"	½"-2"
9"	¾"-2"
12"	¾"-2"
4" dbl. strp.	¾"-2"

STEEL PIPE

Size	Tapping range
1½"	½"-1¼"
2"	½"-1¼"
3"	½"-1½"
4"	½"-1½"
6"	¾"-2"
8"	¾"-2"

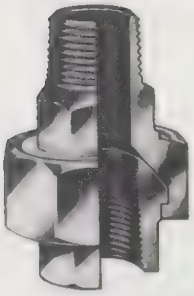
STYLE 118. PIPE REPAIR CLAMPS



L32

B.S.P. Size	Clamp Width
½", ¾", 1", 1¼", 1½"	3"
2", 3", 4", 6"	3", 6", 9"

STEEL PIPE UNIONS

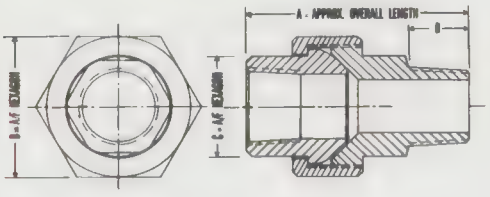


MALE-FEMALE

Steel-steel, Steel-bronze or Bronze-bronze Seats available.

Screwed B.S.P. Tapered or A.P.I. Tapered Threads

L35MF

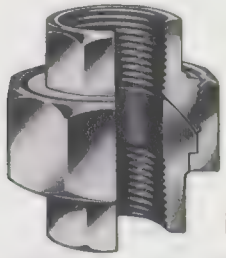


DIMENSIONS INCHES

Size	A	B	C	D
$\frac{1}{4}$	$2\frac{5}{16}$	1.375	0.85	$\frac{11}{16}$
$\frac{3}{8}$	$2\frac{5}{16}$	1.375	0.85	$\frac{11}{16}$
$\frac{1}{2}$	$2\frac{9}{16}$	1.67	1.03	$\frac{13}{16}$
$\frac{3}{4}$	3	2.05	1.35	$\frac{7}{8}$
1	$3\frac{5}{16}$	2.413	1.56	1
$1\frac{1}{4}$	$4\frac{1}{16}$	3.00	1.97	$1\frac{1}{4}$
$1\frac{1}{2}$	$4\frac{5}{8}$	3.25	2.16	$1\frac{1}{4}$
2	$4\frac{13}{16}$	4.00	2.75	$1\frac{1}{4}$
$2\frac{1}{2}$	$5\frac{7}{8}$	4.875	3.375	$1\frac{1}{4}$
3	$6\frac{1}{8}$	5.625	4.00	$1\frac{3}{8}$
4	$6\frac{3}{8}$	6.75	5.00	$1\frac{1}{2}$

ZINC PLATED UNIONS

Male-female or female-female with steel-steel, steel-bronze or bronze-bronze seats. Completely zinc plated, internally and externally.

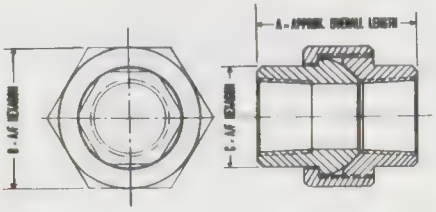


FEMALE-FEMALE

Steel-steel, Steel-bronze or Bronze-bronze Seats available.

Screwed B.S.P. Tapered or A.P.I. Tapered Threads

L35FF

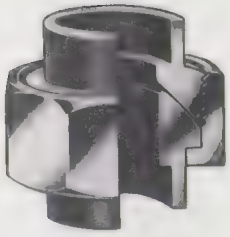


DIMENSIONS INCHES

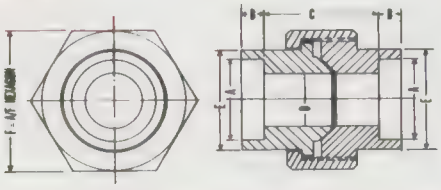
Size	A	B	C
$\frac{1}{4}$	$1\frac{11}{16}$	1.375	0.85
$\frac{3}{8}$	$1\frac{11}{16}$	1.375	0.85
$\frac{1}{2}$	$1\frac{3}{8}$	1.670	1.03
$\frac{3}{4}$	$2\frac{3}{16}$	2.050	1.35
1	$2\frac{5}{8}$	2.413	1.56
$1\frac{1}{4}$	$2\frac{7}{8}$	3.00	1.97
$1\frac{1}{2}$	$3\frac{3}{8}$	3.25	2.16
2	$3\frac{5}{8}$	4.00	2.75
$2\frac{1}{2}$	$4\frac{3}{8}$	4.875	3.75
3	$4\frac{3}{4}$	5.625	4.00
4	$4\frac{7}{8}$	6.75	5.00

SOCKET WELD

Available in Steel-steel Seats only.



L35SW



PRESSURES:
2,000 lb. per sq. in. Cold
600 lb. per sq. in. Hot
Weld or braze as mild steel.

DIMENSIONS INCHES

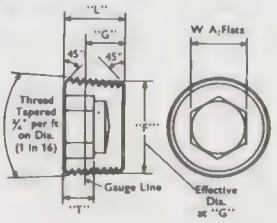
Size	A	B	C	D	E	F
$\frac{1}{4}$	.555	$\frac{1}{4}$	$1\frac{3}{16}$	$\frac{23}{64}$	$\frac{13}{16}$	$1\frac{3}{8}$
$\frac{3}{8}$	.710	$\frac{1}{4}$	$1\frac{7}{16}$	$\frac{31}{64}$	$\frac{15}{16}$	$1\frac{1}{2}$
$\frac{1}{2}$	.870	$\frac{5}{16}$	$1\frac{1}{2}$	$\frac{5}{8}$	$1\frac{3}{16}$	$1\frac{3}{4}$
$\frac{3}{4}$	1.090	$\frac{5}{16}$	$1\frac{11}{16}$	$\frac{13}{16}$	$1\frac{3}{8}$	2.05
1	1.365	$\frac{3}{8}$	$1\frac{13}{16}$	$1\frac{1}{16}$	$1\frac{11}{16}$	2.413
$1\frac{1}{4}$	1.705	$\frac{3}{8}$	$1\frac{7}{8}$	$1\frac{3}{8}$	$2\frac{1}{16}$	3
$1\frac{1}{2}$	1.930	$\frac{1}{2}$	$2\frac{1}{8}$	$1\frac{5}{8}$	$2\frac{5}{16}$	$3\frac{1}{4}$
2	2.410	$\frac{5}{8}$	$2\frac{1}{4}$	$2\frac{1}{16}$	$2\frac{13}{16}$	4
$2\frac{1}{2}$	3.00	$\frac{5}{8}$	$2\frac{1}{8}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$4\frac{7}{8}$
3	3.5	$\frac{5}{8}$	$2\frac{3}{4}$	3	$4\frac{3}{16}$	$5\frac{5}{8}$
4	4.5	$\frac{5}{8}$	3	4	$5\frac{1}{4}$	$6\frac{3}{4}$

TAPER PRESSURE PLUGS

DIMENSIONS INCHES

Pressure Plug Size B.S.P.	Plug length	Effective dia. at Gauge Line		"G"
	"L"	"F"		
Nomi. T.P.I.	Nomi.	Max.	Min.	Nomi.
$\frac{1}{8}$ – 28	$\frac{3}{8}$	.3601	.3580	.1563
$\frac{1}{4}$ – 19	$\frac{1}{2}$	.4843	.4810	.2367
$\frac{3}{8}$ – 19	$\frac{9}{16}$	.6223	.6190	.250
$\frac{1}{2}$ – 14	$\frac{11}{16}$	.7793	.7748	.3214
$\frac{3}{8}$ – 14	$\frac{3}{4}$	.8563	.8518	.3214
$\frac{3}{4}$ – 14	$\frac{13}{16}$	.9953	.9908	.375
1 – 11	1	1.2508	1.2451	.4091
$1\frac{1}{4}$ – 11	$1\frac{1}{4}$	1.5918	1.5858	.5000
$1\frac{1}{2}$ – 11	$1\frac{1}{4}$	1.8238	1.8167	.5000

L36

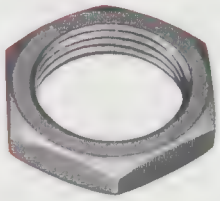


DIMENSIONS INCHES

Pressure Plug Size A.N.P.T.F.	Plug length	Effective dia. at Gauge Line		"G"
	"L"	"F"		
Nomi. T.P.I.	Nomi.	Max.	Min.	Nomi.
$\frac{1}{16}$ – 27	$\frac{5}{16}$	.2812	.2788	.160
$\frac{1}{8}$ – 27	$\frac{3}{8}$	.3748	.3720	.180
$\frac{1}{4}$ – 18	$\frac{7}{16}$	.4899	.4867	.200
$\frac{3}{8}$ – 18	$\frac{1}{2}$	.6270	.6237	.240
$\frac{1}{2}$ – 14	$\frac{9}{16}$	.7784	.7747	.320
$\frac{3}{4}$ – 14	$\frac{5}{8}$	.9889	.9849	.339
1 – $11\frac{1}{2}$	$\frac{3}{4}$	1.2386	1.2343	.400
$1\frac{1}{4}$ – $11\frac{1}{2}$	$\frac{13}{16}$	1.5834	1.5788	.420
$1\frac{1}{2}$ – $11\frac{1}{2}$	$\frac{13}{16}$	1.8223	1.8177	.420

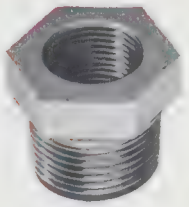
PIPE FITTINGS — STEEL B.S.P. SIZES

Class "B" Galvanised — Class "C" Steam



BACKNUT

$\frac{1}{8}$″ $\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″ 2″

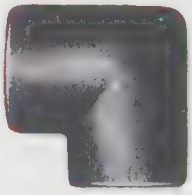


BUSH

$\frac{1}{4}$″ × $\frac{1}{8}$″
$\frac{3}{8}$″ × $\frac{1}{8}$″
$\frac{3}{8}$″ × $\frac{1}{4}$″
$\frac{1}{2}$″ × $\frac{1}{4}$″
$\frac{1}{2}$″ × $\frac{3}{8}$″
$\frac{3}{4}$″ × $\frac{1}{4}$″
$\frac{3}{4}$″ × $\frac{3}{8}$″
$\frac{3}{4}$″ × $\frac{1}{2}$″
1″ × $\frac{1}{4}$″
1″ × $\frac{3}{8}$″
1″ × $\frac{1}{2}$″
1″ × $\frac{3}{4}$″
1$\frac{1}{4}$″ × $\frac{1}{2}$″
1$\frac{1}{4}$″ × $\frac{3}{4}$″
1$\frac{1}{4}$″ × 1″
1$\frac{1}{2}$″ × $\frac{1}{2}$″
1$\frac{1}{2}$″ × $\frac{3}{4}$″
1$\frac{1}{2}$″ × 1″
1$\frac{1}{2}$″ × 1$\frac{1}{4}$″
2″ × $\frac{1}{2}$″
2″ × $\frac{3}{4}$″
2″ × 1″
2″ × 1$\frac{1}{4}$″
2″ × 1$\frac{1}{2}$″
2$\frac{1}{2}$″ × 1$\frac{1}{2}$″
2$\frac{1}{2}$″ × 2″
3″ × 2″
3″ × 2$\frac{1}{2}$″
4″ × 2″
4″ × 2$\frac{1}{2}$″
4″ × 3″

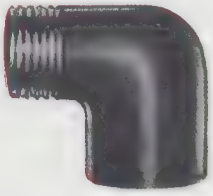
CAP

$\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″ 2″ 2$\frac{1}{2}$″ 3″ 4″



ELBOW F & F

$\frac{1}{8}$″ $\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″ 2″
2$\frac{1}{2}$″ 3″ 4″ 5″ 6″

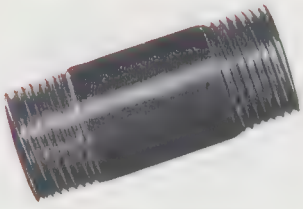


ELBOW M & F

$\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″ 2″

PLAIN NIPPLE

$\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″ 2″ 2$\frac{1}{2}$″ 3″



BARREL NIPPLE

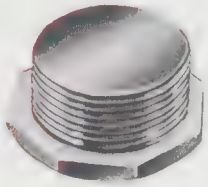
$\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″
1$\frac{1}{2}$″ 2″ 2$\frac{1}{2}$″ 3″

REDUCING NIPPLE

$\frac{1}{4}$″ × $\frac{1}{8}$″
$\frac{3}{8}$″ × $\frac{1}{8}$″
$\frac{3}{8}$″ × $\frac{1}{4}$″
$\frac{1}{2}$″ × $\frac{1}{4}$″
$\frac{1}{2}$″ × $\frac{3}{8}$″
$\frac{3}{4}$″ × $\frac{3}{8}$″
$\frac{3}{4}$″ × $\frac{1}{2}$″
1″ × $\frac{1}{2}$″
1″ × $\frac{3}{4}$″
1$\frac{1}{4}$″ × $\frac{3}{4}$″
1$\frac{1}{4}$″ × 1″
1$\frac{1}{2}$″ × $\frac{3}{4}$″
1$\frac{1}{2}$″ × 1″
1$\frac{1}{2}$″ × 1$\frac{1}{4}$″
2″ × $\frac{3}{4}$″
2″ × 1″
2″ × 1$\frac{1}{4}$″
2″ × 1$\frac{1}{2}$″
2$\frac{1}{2}$″ × 2″
3″ × 2″
3″ × 2$\frac{1}{2}$″
4″ × 3″

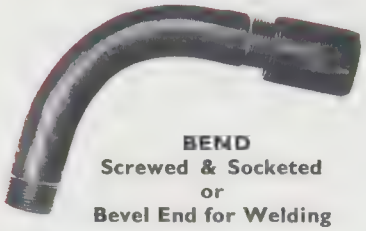
HEXAGON NIPPLE

$\frac{1}{8}$″ $\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″
2″ 2$\frac{1}{2}$″ 3″ 4″



PLUG

$\frac{1}{8}$″ $\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″
2″ 2$\frac{1}{2}$″ 3″ 4″



BEND
Screwed & Socketed
or
Bevel End for Welding

$\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″ 2″
2$\frac{1}{2}$″ 3″ 4″ 5″ 6″

SOCKET

$\frac{1}{8}$″ $\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ 1″ 1$\frac{1}{4}$″ 1$\frac{1}{2}$″
2″ 2$\frac{1}{2}$″ 3″ 3$\frac{1}{2}$″ 4″ 5″ 6″

PIPE FITTINGS — STEEL B.S.P. SIZES

Class "B" Galvanised — Class "C" Steam

REDUCING SOCKET

3/8" x 1/4"	3/4" x 1/2"	1 1/4" x 1"	2" x 1"	2 1/2" x 2"	4" x 2"
1/2" x 1/4"	1" x 1/2"	1 1/2" x 3/4"	2" x 1 1/4"	3" x 1"	4" x 2 1/2"
1/2" x 3/8"	1" x 3/4"	1 1/2" x 1"	2" x 1 1/2"	3" x 2"	4" x 3"
3/4" x 3/8"	1 1/4" x 3/4"	1 1/2" x 1 1/4"	2 1/2" x 1 1/2"	3" x 2 1/2"	6" x 4"

SPRING

Not Socketed

45° Galvanised or Steam

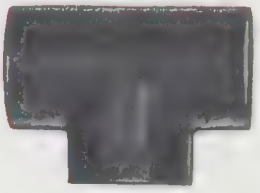
or

Bevel end for welding

1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3" 4"

REDUCING TEE

3/8" x 1/4"	1 1/2" x 3/4"	2" x 1 1/2"	3" x 2"
1/2" x 1/4"	1 1/2" x 1"	2 1/2" x 1"	3" x 2 1/2"
1/2" x 3/8"	1 1/2" x 1 1/4"	2 1/2" x 1 1/2"	4" x 2"
3/4" x 1/2"	2" x 1/2"	2 1/2" x 2"	4" x 3"
1" x 1/2"	2" x 3/4"	3" x 1"	6" x 3"
1" x 3/4"	2" x 1"	3" x 1 1/2"	6" x 4"
1 1/4" x 1"	2" x 1 1/4"		



TEE

1/8" 1/4" 3/8" 1/2" 3/4" 1" 1 1/4"
1 1/2" 2" 2 1/2" 3" 4" 6"

FLANGE

GALVANISED ONLY

Table D — 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2"
2" 2 1/2" 3" 4" 5" 6"

STEEL ONLY

Table E — 3/8" 1/2" 3/4" 1" 1 1/4" 1 1/2"
2" 2 1/2" 3" 4" 5" 6"

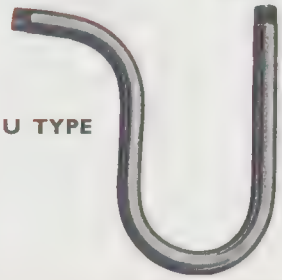
Table H — 1/2" 3/4" 1" 1 1/4" 1 1/2" 2"
2 1/2" 3" 4" 5" 6"

PIPE PIECE GALVANISED

Sizes 1/2" 3/4" 1" 1 1/4" 1 1/2" 2"

Lengths to suit your needs.

SYPHON PIPES



U TYPE

PIG TAIL

1/4", 3/8", & 1/2"

LONG SCREWS GALVANISED

1/2" 3/4" 1" 1 1/4" 1 1/2" 2" 2 1/2" 3" 4"

STEEL BUTTWELD FITTINGS AND FLANGES

90° Long Radius Elbows

L37

Nom. Pipe Size	Outside Diam.	Center to Face	STANDARD WALL Sch. 40 Inside Diam.	Wall Thick.	Approx. Wt. Lbs.	EXTRA STRONG WALL Sch. 80 Inside Diam.	Wall Thick.	Approx. Wt. Lbs.
½	.840	1½	.622	.109	.16	.546	.147	.20
¾	1.050	1⅝	.824	.113	.16	.742	.154	.20
1	1.315	1½	1.049	.133	.35	.957	.179	.45
1¼	1.660	1⅞	1.380	.140	.6	1.278	.191	.7
1½	1.900	2¼	1.610	.145	.8	1.500	.200	1.0
2	2.375	3	2.067	.154	1.5	1.939	.218	2.0
2½	2.875	3¾	2.469	.203	3.0	2.323	.276	4.0
3	3.500	4½	3.068	.216	4.5	2.900	.300	6.0
3½	4.000	5¼	3.548	.226	7.	3.364	.318	8.5
4	4.500	6	4.026	.237	9.	3.826	.337	12.
5	5.563	7½	5.047	.258	15.	4.813	.375	20.
6	6.625	9	6.065	.280	24.	5.761	.432	32.
8	8.625	12	7.981	.322	50.	7.625	.500	68.
10	10.750	15	10.020	.365	83.	9.750	.500	112.
12	12.750	18	12.000	.375	123.	11.750	.500	150.
14	14 000	21	13.250	.375	164.	13.000	.500	192.
16	16.000	24	15.250	.375	210.	15 000	.500	258.
18	18.000	27	17.250	.375	273.	17.000	.500	326.
20	20.000	30	19.250	.375	343.	19.000	.500	420.
22	22.000	33	21.250	.375	385.	21.000	.500	508.
24	24.000	36	23.250	.375	516.	23.000	.500	606.
26	26 000	39	25.250	.375	602.	25.000	.500	713.
30	30.000	45	29.250	.375	775.	29.000	.500	953.
34	34 000	51	33.250	.375	926.	33 000	.500	1230
36	36.000	54	35.250	.375	1040.	35.000	.500	1380
42	42.000	63	41.250	.375	1420.	41.000	.500	1880.

90° Short Radius Elbows

L38

Nom. Pipe Size	Outside Diam.	Center To Face	STANDARD WALL Sch. 40 Inside Diam.	Wall Thick.	Approx. Wt. Lbs.	EXTRA STRONG WALL Sch. 80 Inside Diam.	Wall Thick.	Approx. Wt Lbs
1	1.315	1	1.049	.133	.25			
1¼	1.660	1¼	1 380	.140	.40			
1½	1.900	1½	1.610	.145	.50	1.500	.200	.7
2	2.375	2	2.067	.154	1.	1.939	.218	2.0
2½	2.875	2½	2.469	.203	2.	2.323	.276	3.0
3	3.500	3	3 068	.216	3.	2 900	.300	4.5
3½	4.000	3½	3.548	.226	4.	3.364	.318	6.5
4	4.500	4	4.026	.237	6.	3.826	.337	8.5
5	5.563	5	5.047	.258	10.	4 813	.375	13.5
6	6.625	6	6 065	.280	15.	5 761	.432	24 0
8	8.625	8	7 981	.322	32	7 625	.500	48 0
10	10.750	10	10.020	.365	52.	9.750	.500	76
12	12 750	12	12 000	.375	85.	11 750	500	107
14	14 000	14	13 250	.375	106.	13 000	.500	133
16	16.000	16	15 250	.375	144.	15 000	500	175
18	18.000	18	17 250	.375	172.	17 000	.500	214
20	20 000	20	19 250	.375	216.	19 000	500	282
24	24.000	24	23 250	.375	296.	23 000	500	390
30	30.000	30	29 250	.375	470.	29 000	.500	644
36	36.000	36	35 250	.375	692.	35 000	.500	913
42	42.000	42	41 250	.375	1079.	41 .000	.500	1430.

45° Long Radius Elbows

L39

Nom. Pipe Size	Outside Diam.	Center To Face	STANDARD WALL Sch. 40 Inside Diam.	Wall Thick.	Approx. Wt. Lbs.	EXTRA STRONG WALL Sch. 80 Inside Diam.	Wall Thick.	Approx. Wt. Lbs.
½	.840	⅝	.622	.109	.10	.546	.147	.12
¾	1.050	11/16	.824	.113	.10	.742	.154	.12
1	1.315	⅞	1.049	.133	.25	.957	.179	.30
1¼	1.660	1	1.380	.140	.4	1.278	.191	.5
1½	1.900	1⅛	1.610	.145	.5	1.500	.200	.6
2	2.375	1⅜	2.067	.154	.8	1.939	.218	1.0
2½	2.875	1¾	2.469	.203	1.7	2.323	.276	2.0
3	3.500	2	3.068	.216	2.5	2.900	.300	3.5
3½	4.000	2¼	3.548	.226	3.5	3.364	.318	5.
4	4.500	2½	4.026	.237	4.0	3.826	.337	7.
5	5.563	3⅛	5.047	.258	7.5	4.813	.375	12.
6	6.625	3¾	6.065	.280	12.	5.761	.432	17.
8	8.625	5	7.981	.322	25.	7.625	.500	35.
10	10.750	6¼	10.020	.365	42.	9.750	.500	54.
12	12.750	7½	12.000	.375	61.	11.750	.500	76.
14	14.000	8¾	13.250	.375	82.	13.000	.500	100.
16	16 000	10	15.250	.375	100.	15.000	.500	130.
18	18 000	11¼	17.250	.375	135.	17.000	.500	162.
20	20 000	12½	19.250	.375	174.	19.000	.500	200.
22	22 000	13½	21.250	.375	192.	21.000	.500	253.
24	24 000	15	23.250	.375	251.	23 000	.500	290.
26	26 000	16	25 250	.375	299.	25.000	.500	355.
30	30 000	18½	29.250	.375	379.	29.000	.500	475.
34	34 000	21	33 250	.375	463.	33.000	.500	615.
36	36 000	22¼	35.250	.375	518.	35.000	.500	686.
42	42 000	26	41.250	.375	707.	41.000	.500	937.

180° Long Radius Returns

L40

Nom. Pipe Size	Outside Diam.	Center To Center	Back To Face	STANDARD WALL Sch. 40 Wall Thick.	Approx. Wt Lbs.	EXTRA STR. WALL Sch. 80 Wall Thick.	Approx. Wt. Lbs.
½	.840	3	1 5/16	.109	.35	.147	.45
¾	1.050	2¼	1 11/16	.113	.35	.154	.45
1	1.315	3	2 5/16	.133	.7	.179	1.0
1¼	1.660	3¾	2¾	.140	1.0	.191	1.5
1½	1.900	4½	3¼	.145	1.6	.200	2.
2	2.375	6	4 5/16	.154	2.5	.218	4.
2½	2.875	7½	5 5/16	.203	5.5	.276	8.
3	3.500	9	6¼	.216	8.	.300	12.
3½	4.000	10½	7¼	.226	13.	.318	18.
4	4.500	12	8¼	.237	18.	.337	24.
5	5.563	15	10 9/16	.258	29.	.375	42.
6	6.625	18	12 13/16	.280	42.	.432	69.
8	8.625	24	16 7/16	.322	102.	.500	139
10	10.750	30	20⅞	.365	167.	.500	218.
12	12.750	36	24⅜	.375	256.	.500	308
14	14.000	42	28	.375	351.	.500	393
16	16.000	48	32	.375	422.	.500	530
18	18.000	54	36	.375	517.	500	664
20	20.000	60	40	.375	632.	.500	830
22	22.000	66	44	.375	771.	.500	1020
24	24 000	72	48	.375	902.	.500	1220
26	26 000	78	52	.375	1191.	.500	1430
30	30.000	90	60	.375	1541.	.500	1910

STEEL BUTTWELD FITTINGS AND FLANGES

Tees

L41

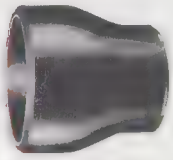
Nom. Pipe Size	Outside Diam	Center to End of Run	Center to End of Branch	STANDARD WALL Sch. 40 Wall Thick	STANDARD WALL Sch. 40 Approx. Wt. Lbs	EXTRA STR. WALL Sch. 80 Wall Thick	EXTRA STR. WALL Sch. 80 Approx. Wt. Lbs
½	.840	1	1	.109	.25	.147	.40
¾	1.050	1⅛	1⅛	.113	.40	.154	.5
1	1.315	1½	1½	.133	.80	.179	1.0
1¼	1.660	1⅞	1⅞	.140	1.4	.191	1.6
1½	1.900	2¼	2¼	.145	2.	.200	2.5
2	2.375	2½	2½	.154	3.	.218	4.
2½	2.875	3	3	.203	5.	.276	6.
3	3.500	3¾	3⅜	.216	7.5	.300	10.
3½	4.000	3¾	3¾	.226	10.	.318	13.
4	4.500	4¼	4⅛	.237	13.	.337	16.
5	5.563	4⅞	4⅞	.258	21.	.375	27.
6	6.625	5⅝	5⅝	.280	30.	.432	40.
8	8.625	7	7	.322	60.	.500	76.
10	10.750	8½	8½	.365	105.	.500	127.
12	12.750	10	10	.375	143.	.500	179.
14	14.000	11	11	.375	206.	.500	233.
16	16.000	12	12	.375	265.	.500	287.
18	18.000	13½	13½	.375	318.	.500	421.
20	20.000	15	15	.375	369.	.500	481.
22	22.000	16½	16½	.375	464.	.500	586.
24	24.000	17	17	.375	521.	.500	687.
26	26.000	19½	19½	.375	710.	.500	794.
30	30.000	22	22	.375	926.	.500	1160.
34	34.000	25	25	.375	1136.	.500	1420.
36	36.000	26½	26½	.375	1294.	.500	1610.

Welding Caps

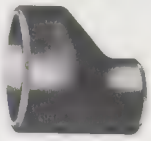
L44

Nom. Pipe Size	Outside Diam.	Length	STANDARD WALL Sch. 40 Tangent	STANDARD WALL Sch. 40 Wall Thick.	STANDARD WALL Sch. 40 Approx. Wt. Lbs.	EXTRA STRONG WALL Sch. 80 Tangent	EXTRA STRONG WALL Sch. 80 Wall Thick.	EXTRA STRONG WALL Sch. 80 Approx. Wt. Lbs.
½	.840	1	.74	.109	.07	.72	.147	.09
¾	1.050	1¼	.93	.113	.13	.91	.154	.16
1	1.315	1½	1.10	.133	.25	1.08	.179	.3
1¼	1.660	1½	1.02	.140	.3	.99	.191	.4
1½	1.900	1½	.95	.145	.35	.92	.200	.5
2	2.375	1½	.83	.154	.5	.80	.218	.7
2½	2.875	1½	.68	.203	.8	.64	.276	1.
3	3.500	2	1.02	.216	1.5	98	.300	2.
3½	4.000	2½	1.39	.226	2.0	1.34	.318	3.
4	4.500	2½	1.26	.237	2 5	1 21	.337	4.
5	5.563	3	1.48	.258	4.5	1.42	.375	6.
6	6.625	3½	1.70	.280	7.	1.63	.432	10.
8	8.625	4	1.68	.322	12.	1 59	.500	18.
10	10.750	5	2 13	.365	20.	2 06	.500	28.
12	12.750	6	2 62	.375	29	2.56	500	36
14	14.000	6½	2.81	.375	35.	2.75	.500	48
16	16 000	7	2 81	.375	43	2 75	.500	60
18	18 000	8	3.31	.375	58.	3 25	.500	78
20	20.000	9	3.81	.375	72.	3.75	.500	100
22	22 000	10	4 31	.375	86.	4.25	.500	115
24	24.000	10½	4.31	.375	105.	4.25	.500	145.
26	26 000	10½	3.81	.375	110.	3.75	.500	155
30	30.000	10½	2.81	.375	125.	2.75	.500	175
34	34.000	10½	1.81	.375	160.	1.75	.500	210
36	36.000	10½	1.31	.375	175.	1.25	.500	235.
42	42.000	12	1.31	.375	230.	1.25	.500	300

Concentric and Eccentric Reducers



CONCENTRIC
Standard Wall
Sch. 40
Extra Strong Wall
Sch. 80



ECCENTRIC
Standard Wall
Sch. 40
Extra Strong Wall
Sch. 80

L42

Nom. Pipe Size	Length	Approx. Wt. Lbs. Standard Wall	Approx. Wt. Lbs. Ex. Str. Wall
¾ x ⅜	1½	.21	.24
¾ x ½	1½	.21	.26
1 x ⅜	2	.30	.37
1 x ½	2	.30	.37
1 x ¾	2	.30	.37
1¼ x ½	2	.44	.5
1¼ x ¾	2	.44	.5
1¼ x 1	2	.44	.5
1½ x ½	2½	.56	.7
1½ x ¾	2½	.56	.7
1½ x 1	2½	.56	.7
1½ x 1¼	2½	.56	.7
2 x ¾	3	1.0	1.2
2 x 1	3	1.0	1.2
2 x 1¼	3	1.0	1.2
2 x 1½	3	1.0	1.2
2½ x 1	3½	1.5	2.
2½ x 1¼	3½	1.5	2.
2½ x 1½	3½	1.5	2.
2½ x 2	3½	1.5	2.
3 x 1¼	3½	2.5	3.
3 x 1½	3½	2.5	3.
3 x 2	3½	2.5	3.
3 x 2½	3½	2.5	3.
3½ x 1¼	4	3.0	4.
3½ x 1½	4	3.0	4.
3½ x 2	4	3.0	4.
3½ x 2½	4	3.0	4.
3½ x 3	4	3.0	4.
4 x 1½	4	3.5	5.
4 x 2	4	3.5	5.
4 x 2½	4	3.5	5.
4 x 3	4	3.5	5.
4 x 3½	4	3.5	5.
5 x 2	5	5 5	7.
5 x 2½	5	5.5	7.
5 x 3	5	5.5	7.
5 x 3½	5	5.5	7.
5 x 4	5	5.5	7.

L43

Nom. Pipe Size	Length	Approx. Wt. Lbs. Standard Wall	Approx. Wt. Lbs. Ex. Str. Wall
6 x 2½	5½	8.	11
6 x 3	5½	8.	11.
6 x 3½	5½	8.	11.
6 x 4	5½	8.	11
6 x 5	5½	8.	11
8 x 3½	6	13.	18
8 x 4	6	13.	18
8 x 5	6	13.	18
8 x 6	6	13.	18
10 x 4	7	22.	29
10 x 5	7	22.	29
10 x 6	7	22.	29
10 x 8	7	22.	29
12 x 5	8	32.	43
12 x 6	8	32.	43
12 x 8	8	32.	43
12 x 10	8	32.	43
14 x 6	13	61.	90
14 x 8	13	61.	90.
14 x 10	13	61.	90
14 x 12	13	61.	90
16 x 8	14	73.	100
16 x 10	14	73.	100
16 x 12	14	73.	100
16 x 14	14	73.	100
18 x 10	15	91.	115
18 x 12	15	91.	115
18 x 14	15	91.	115
18 x 16	15	91.	115
20 x 12	20	136.	180
20 x 14	20	136.	180
20 x 16	20	136.	180
20 x 18	20	136.	180.
22 x 14	20	148.	195
22 x 16	20	151.	198.
22 x 18	20	154.	202
22 x 20	20	157.	207.
24 x 16	20	162.	210
24 x 18	20	162.	210:
24 x 20	20	162.	210.

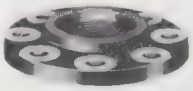
A.S.A. FORGED STEEL FLANGES

Welding Neck

L45

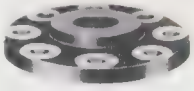
Slip-on

L46



Screwed

L47



Socket Weld

L48

Blind

L49

150 LB. STANDARD

Nom. Pipe Size	Outside Diam. Flange	Flange Thickness	DRILLING TEMPLATE No. Holes	Diam. Bolts	Bolt Circle	WELDING NECK Hub Length	Approx. Wt Lbs	SLIP-ON Hub Length	Approx. Wt Lbs	SCREWED Hub Length	Approx. Wt Lbs	SOCKET TYPE Socket Depth	Approx. Wt Lbs	BLIND Approx. Wt Lbs
½	3½	7/16	4	½	2⅜	1⅜	2	⅝	2	⅝	2	¾	2	2
¾	3⅞	½	4	½	2¾	2 1/16	2	⅝	2	⅝	2	7/16	2	2
1	4¼	9/16	4	½	3⅛	2 3/16	2	11/16	2	11/16	2	½	2	2
1¼	4⅝	⅝	4	½	3½	2¼	4	13/16	3	13/16	3	9/16	3	3
1½	5	11/16	4	½	3⅞	2 5/16	5	⅞	3	⅞	3	⅝	3	4
2	6	¾	4	⅝	4¾	2½	9	1	5	1	5	11/16	5	4
2½	7	⅞	4	⅝	5½	2¾	11	1⅛	7	1⅛	7	¾	7	11
3	7½	15/16	4	⅝	6	2¾	14	1 3/16	8	1 3/16	8	13/16	8	14
3½	8½	15/16	8	⅝	7	2 13/16	15	1¼	11	1¼	11	⅞	11	13
4	9	15/16	8	⅝	7½	3	16	1 5/16	13	1 5/16	13	15/16	13	19
5	10	15/16	8	¾	8½	3½	21	1 7/16	15	1 7/16	15	15/16	15	21
6	11	1	8	¾	9½	3½	25	1 5/16	19	1 5/16	19	1 1/16	19	28
8	13½	1⅛	8	¾	11¾	4	40	1⅝	30	1⅝	30	1¼	30	48
10	16	1 3/16	12	⅞	14¼	4	56	1 15/16	42	1 15/16	42	1 9/16	42	70
12	19	1¼	12	⅞	17	4½	86	2 1/16	64	2 1/16	64	1 9/16	64	105
14	21	1⅜	12	1	18¾	5	111	2¼	85	2¼	85	1⅞	85	135
16	23½	1 7/16	16	1	21¼	5	141	2½	94	2½	94	1¾	94	176
18	25	1 9/16	16	1⅛	22¾	5½	153	2 11/16	120	2 11/16	120	1 15/16	120	214
20	27½	1 11/16	20	1⅛	25	5 11/16	188	2⅞	155	2⅞	155	2⅛	155	284
22	29½	1 13/16	20	1¼	27¼	5⅞	224	3⅛	159	3⅛	159	..	..	333
24	32	1⅞	20	1¼	29½	6	270	3¼	210	3¼	210	2½	210	398
26	34¼	2	24	1¼	31¾	5	270	3⅜	248	3⅜	248	..	..	498
30	38¾	2⅛	28	1¼	36	5⅛	375	3½	319	3½	319	..	..	681
34	43¼	2 5/16	32	1½	40½	5 15/16	470	3 15/16	359	3 15/16	359	..	..	936
36	46	2⅜	32	1½	42¾	5⅞	530	3¾	401	3¾	401	..	..	1068
42	53	2⅝	36	1½	49½	7⅛	788	4	690	4	690	..	..	1578

300 LB. STANDARD

Nom. Pipe Size	Outside Diam. Flange	Flange Thickness	DRILLING TEMPLATE No. Holes	Diam. Bolts	Bolt Circle	WELDING NECK Hub Length	Approx. Wt Lbs	SLIP-ON Hub Length	Approx. Wt Lbs	SCREWED Hub Length	Approx. Wt Lbs	SOCKET TYPE Socket Depth	Approx. Wt Lbs	BLIND Approx. Wt Lbs
½	3¾	9/16	4	½	2⅝	2 1/16	4	⅞	3	⅞	3	⅜	3	2
¾	4⅛	⅝	4	⅝	3¼	2¼	4	1	3	1	3	7/16	3	3
1	4⅞	11/16	4	⅝	3½	2 3/16	5	1 1/16	3	1 1/16	3	½	3	4
1¼	5¼	¾	4	⅝	3⅞	2 5/16	6	1 1/16	4	1 1/16	4	9/16	4	6
1½	6⅛	13/16	4	¾	4½	2 11/16	9	1 3/16	6	1 3/16	6	⅝	6	7
2	6½	⅞	8	⅝	5	2¾	10	1 5/16	7	1 5/16	7	11/16	7	8
2½	7½	1	8	¾	5⅞	3	13	1½	10	1½	10	¾	10	15
3	8¼	1⅛	8	¾	6⅝	3⅛	16	1 11/16	13	1 11/16	13	13/16	13	16
3½	9	1 3/16	8	¾	7¼	3 3/16	19	1¾	17	1¾	17	⅞	17	20
4	10	1¼	8	¾	7⅞	3⅜	26	1⅞	22	1⅞	22	15/16	22	27
5	11	1⅜	8	¾	9¼	3⅞	35	2	28	2	28	..	..	41
6	12½	1 7/16	12	¾	10⅝	3⅞	45	2 1/16	39	2 1/16	39	..	..	50
8	15	1⅝	12	⅞	13	4⅜	70	2 1/16	58	2 1/16	58	..	..	80
10	17½	1⅞	16	1	15¼	4⅝	94	2⅜	82	2⅜	82	..	..	120
12	20½	2	16	1⅛	17¾	5⅛	140	2⅜	115	2⅜	115	..	..	184
14	23	2⅛	20	1⅛	20¼	5⅜	190	3	163	3	163	..	..	249
16	25½	2⅜	20	1⅜	22½	5¾	250	3¼	220	3¼	220	..	..	324
18	28	2⅜	24	1¼	24¾	6¼	305	3½	280	3½	280	..	..	416
20	30½	2½	24	1⅜	27	6⅜	380	3¾	325	3¾	325	..	..	516
22	33	2⅝	24	1½	29¼	6½	429	4	433	4	433	..	..	594
24	36	2¾	24	1½	32	6⅝	540	4 7/16	492	4 7/16	492	..	..	763
26	38¼	3⅛	28	1⅜	34½	7⅛	615	7¼	552	7¼	552	..	..	950
30	43	3⅜	28	1¾	39¼	8¼	858	8¼	779	8¼	779	..	..	1403
34	47½	4	28	1⅞	43½	9⅛	1110	9⅛	1014	9⅛	1014	..	..	1899
36	50	4⅛	32	2	46	9½	1233	9½	1130	9½	1130	..	..	2151
42	57	4⅝	36	2	52¾	10⅞	1739	10⅞	1610	10⅞	1610	..	..	3164

A.S.A. FORGED STEEL FLANGES

400 LB. STANDARD

Nom. Pipe Size	Outside Diam. Flange	Flange Thickness	DRILLING TEMPLATE			WELDING NECK		SLIP-ON		SCREWED		BLIND
			No. Holes	Diam. Bolts	Bolt Circle	Hub Length	Approx. Wt. Lbs.	Hub Length	Approx. Wt. Lbs.	Hub Length	Approx. Wt. Lbs.	Approx Wt. Lbs.
½	3¾	9/16	4	½	2⅜	2 1/16	4	⅞	3	⅞	3	2
¾	4⅝	⅝	4	⅝	3¼	2¼	6	1	3	1	3	3
1	4⅞	11/16	4	⅝	3½	2 1/16	6	1 1/16	4	1 1/16	4	4
1¼	5¼	13/16	4	⅝	3⅞	2⅜	8	1⅛	6	1¼	6	6
1½	6⅛	⅞	4	¾	4½	2¾	10	1¼	7	1¼	7	8
2	6½	1	8	⅝	5	2⅞	12	1 5/16	9	1 5/16	9	10
2½	7½	1⅛	8	¾	5⅞	3⅛	18	1⅝	13	1⅝	13	15
3	8¼	1¼	8	¾	6⅝	3¼	20	1 13/16	16	1 13/16	16	20
3½	9	1⅜	8	⅞	7¼	3⅜	25	1 15/16	21	1 15/16	21	29
4	10	1⅜	8	⅞	7⅞	3½	31	2	26	2	26	31
5	11	1½	8	⅞	9¼	4	39	2⅛	31	2⅛	31	41
6	12½	1⅝	12	⅞	10⅝	4 1/16	52	2⅛	43	2⅛	43	56
8	15	1⅞	12	1	13	4⅜	82	2 1/16	68	2 1/16	68	95
10	17½	2⅛	16	1⅛	15¼	4⅝	116	2⅜	91	2⅜	91	147
12	20½	2¼	16	1¼	17¾	5⅛	162	3⅛	130	3⅛	130	216
14	23	2⅜	20	1¼	20¼	5⅜	212	3 3/16	192	3 3/16	192	297
16	25½	2½	20	1⅜	22½	6	268	3 5/16	253	3 5/16	253	386
18	28	2⅝	24	1⅜	24¾	6½	344	3⅜	310	3⅜	310	497
20	30½	2¾	24	1½	27	6⅝	427	4	378	4	378	591
22	33	2⅞	24	1⅝	29¼	6¾	465	4⅛	464	4¼	464	685
24	36	3	24	1¾	32	6⅞	616	4½	539	4½	539	926
26	38¼	3½	28	1⅜	34½	7⅛	680	7⅛	616	7⅛	616	1111
30	43	4	28	2	39¼	8⅛	940	8⅛	859	8⅛	859	1596
34	47½	4⅜	28	2	43½	9⅛	1220	9½	1122	9½	1122	2139
36	50	4½	32	2	46	9⅜	1370	9⅜	1269	9⅜	1269	2431
42	57	5⅛	32	2½	53¾	11⅜	1880	11⅜	1759	11⅜	1759	3576

600 LB. STANDARD

Nom. Pipe Size	Outside Diam. Flange	Flange Thickness	DRILLING TEMPLATE			WELDING NECK		SLIP-ON		SCREWED		SOCKET TYPE		BLIND
			No. Holes	Diam. Bolts	Bolt Circle	Hub Length	Approx. Wt Lbs	Hub Length	Approx. Wt Lbs	Hub Length	Approx. Wt Lbs	Socket Depth	Approx. Wt Lbs	Approx Wt Lbs
½	3¾	9/16	4	½	2⅜	2 1/16	4	⅞	3	⅞	3	⅜	3	2
¾	4⅝	⅝	4	⅝	3¼	2¼	6	1	3	1	3	7/16	3	3
1	4⅞	11/16	4	⅝	3½	2 1/16	6	1 1/16	4	1 1/16	4	½	4	4
1¼	5¼	13/16	4	⅝	3⅞	2⅜	8	1⅛	6	1⅛	6	9/16	6	6
1½	6⅛	⅞	4	¾	4½	2¾	10	1¼	7	1¼	7	⅝	7	8
2	6½	1	8	⅝	5	2⅞	12	1 5/16	9	1 5/16	9	11/16	9	10
2½	7½	1⅛	8	¾	5⅞	3⅛	18	1⅝	13	1⅝	13	¾	13	15
3	8¼	1¼	8	¾	6⅝	3¼	20	1 13/16	16	1 13/16	16	13/16	16	20
3½	9	1⅜	8	⅞	7¼	3⅜	25	1 15/16	21	1 15/16	21	⅞	21	29
4	10¾	1½	8	⅞	8½	4	41	2⅛	36	2⅛	36	..	..	41
5	13	1¾	8	1	10½	4½	66	2⅜	63	2⅜	63	..	..	68
6	14	1⅞	12	1	11½	4⅝	77	2⅜	83	2⅜	83	..	..	86
8	16½	2 3/16	12	1⅛	13¾	5¼	111	3	114	3	114	..	..	140
10	20	2½	16	1¼	17	6	180	3⅜	170	3⅜	170	..	..	230
12	22	2⅝	20	1¼	19¼	6⅛	226	3⅝	210	3⅝	210	..	..	295
14	23¾	2¾	20	1⅜	20¾	6½	334	3 11/16	264	3 11/16	264	..	..	378
16	27	3	20	1½	23¾	7	462	4 3/16	366	4 3/16	366	..	..	527
18	29¼	3¼	20	1⅝	25¾	7¼	531	4⅝	476	4⅝	476	..	..	665
20	32	3½	24	1⅝	28½	7½	678	5	612	5	612	..	..	855
22	34¼	3¾	24	1¾	30⅝	7¾	710	5¼	643	5¼	643	..	..	962
24	37	4	24	1⅞	33	8	959	5½	876	5½	876	..	..	1175
26	40	4¼	28	1⅞	36	8¾	960	8¾	898	8¾	898	..	..	1490
30	44½	4½	28	2	40¼	9¾	1230	9¾	1158	9¾	1158	..	..	1972
34	49	4¾	28	2¼	44½	10⅝	1520	10⅝	1436	10⅝	1436	..	..	2610
36	51¾	4⅞	28	2½	47	11⅛	1720	11⅛	1638	11⅛	1638	..	..	3014
42	58¾	5½	28	3¼	53¾	12¼	2410	12¼	2330	12¼	2330			4419

A.S.A. FORGED STEEL FLANGES

900 LB. STANDARD

Nom. Pipe Size	Outside Diam. Flange	Flange Thickness	DRILLING TEMPLATE No. Holes	Diam. Bolts	Bolt Circle	WELDING NECK Hub Length	Approx. Wt Lbs.	SLIP-ON Hub Length	Approx. Wt Lbs.	SCREWED Hub Length	Approx. Wt. Lbs.	BLIND Approx Wt Lbs.
½	4¾	⅞	4	¾	3¼	2⅜	7	1¼	9	1¼	9	4
¾	5⅛	1	4	¾	3½	2¾	7	1⅜	9	1⅜	9	6
1	5⅞	1⅛	4	⅞	4	2⅞	9	1⅜	9	1⅜	9	9
1¼	6¼	1⅛	4	⅞	4⅜	2⅞	10	1⅜	10	1⅜	10	10
1½	7	1¼	4	1	4⅞	3¼	14	1¾	14	1¾	14	14
2	8½	1½	8	⅞	6½	4	25	2¼	25	2¼	25	25
2½	9⅞	1⅝	8	1	7½	4⅜	36	2½	36	2½	36	35
3	9½	1½	8	⅞	7½	4	32	2⅜	31	2⅜	31	32
4	11½	1¾	8	1⅛	9¼	4½	51	2¾	53	2¾	53	54
5	13¾	2	8	1¼	11	5	86	3⅛	83	3⅛	83	87
6	15	2⅜	12	1⅛	12½	5½	110	3⅜	108	3⅜	108	113
8	18½	2½	12	1⅜	15½	6⅜	187	4	172	4	172	197
10	21½	2¾	16	1⅜	18½	7¼	268	4¼	245	4¼	245	290
12	24	3⅛	20	1⅜	21	7⅞	372	4⅝	326	4⅝	326	413
14	25¼	3⅜	20	1½	22	8⅜	562	5⅛	380	5⅛	380	494
16	27¾	3½	20	1⅝	24¼	8½	685	5¼	459	5¼	459	619
18	31	4	20	1⅞	27	9	924	6	647	6	647	880
20	33¾	4⅛	20	2	29½	9¾	1164	6¼	792	6¼	792	1107
24	41	5½	20	2½	35½	11½	2107	8	1480	11¼	1450	2099
26	42¾	5½	20	2¾	37½	11¼	1650	11¼	1450	11¼	1450	2200
30	48½	5⅞	20	3	42¾	12¼	2290	12¼	1990	12¼	1990	3025
34	55	6½	20	3½	48¼	13¾	3230	13¾	2820	13¾	2820	4275
36	57½	6¾	20	3½	50¾	14¼	3650	14¼	3200	14¼	3200	4900

1,500 LB. STANDARD

Nom. Pipe Size	Outside Diam. Flange	Flange Thickness	DRILLING TEMPLATE No. Holes	Diam. Bolts	Bolt Circle	WELDING NECK Hub Length	Approx. Wt Lbs.	SLIP-ON Hub Length	Approx. Wt Lts	SCREWED Hub Length	Approx. Wt Lbs.	BLIND Approx. Wt Lbs
½	4¾	⅞	4	¾	3¼	2⅜	7	1¼	9	1¼	9	4
¾	5⅛	1	4	¾	3½	2¾	7	1⅜	9	1⅜	9	6
1	5⅞	1⅛	4	⅞	4	2⅞	9	1⅜	9	1⅜	9	9
1¼	6¼	1⅛	4	⅞	4⅜	2⅞	10	1⅜	10	1⅜	10	10
1½	7	1¼	4	1	4⅝	3¼	14	1¾	14	1¾	14	14
2	8½	1½	8	⅞	6½	4	25	2¼	25	2¼	25	25
2½	9⅞	1⅝	8	1	7½	4⅜	36	2½	36	2½	36	35
3	10½	1⅞	8	1⅛	8	4⅝	48	2⅞	48	2⅞	48	48
4	12¼	2⅛	8	1¼	9½	4⅞	73	3⅜	73	3⅜	73	73
5	14¾	2¼	8	1½	11½	6¼	132	4⅛	132	4⅛	132	142
6	15½	3¼	12	1⅜	12½	6¾	164	4 11/16	164	4 11/16	164	159
8	19	3⅝	12	1⅝	15½	8⅜	273	5⅝	258	5⅝	258	302
10	23	4¼	12	1⅞	19	10	454	6¼	436	6¼	436	507
12	26½	4⅞	16	2	22½	11⅛	690	7⅛	667	7⅛	667	775
14	29½	5¼	16	2¼	25	11¾		. .				
16	32½	5¾	16	2½	27¾	12¼	Weights	. .	Weights	. .	Weights	Weights
18	36	6⅜	16	2¾	30½	12⅞	on	. .	on	. .	on	on
20	38¾	7	16	3	32¾	14	Appli-	. .	Appli-	. .	Appli-	Appli-
24	46	8	16	3½	39	16	cation	. .	cation	. .	cation	cation

2,500 LB. STANDARD

Diam. Pipe Size	Outside Nom. Flange	Flange Thickness	DRILLING TEMPLATE No. Holes	Diam. Bolts	Bolt Circle	WELDING NECK Hub Length	Approx. Wt. Lbs.	SLIP-ON Hub Length	Approx. Wt. Lbs.	SCREWED Hub Length	Approx. Wt. Lbs.	BLIND Approx. Wt. Lbs
½	5¼	1 11/16	4	¾	3½	2⅛	8	1 11/16	7	1 11/16	7	7
¾	5½	1¼	4	¾	3¾	3⅛	9	1 11/16	9	1 11/16	9	10
1	6¼	1⅜	4	⅞	4¼	3½	13	1⅞	12	1⅞	12	12
1¼	7¼	1½	4	1	5⅛	3¾	20	2 1/16	18	2 1/16	18	18
1½	8	1¾	4	1⅛	5¾	4⅜	28	2⅛	25	2⅛	25	25
2	9¼	2	8	1	6¾	5	42	2¼	38	2¼	38	39
2½	10½	2¼	8	1⅛	7¼	5⅝	52	3⅛	55	3⅛	55	56
3	12	2⅝	8	1¼	9	6⅝	94	3⅜	83	3⅜	83	86
4	14	3	8	1½	10¾	7½	146	4¼	127	4¼	127	133
5	16½	3⅜	8	1⅜	12¼	9	244	5⅛	210	5⅛	210	223
6	19	4¼	8	2	14½	10¾	378	6	323	6	323	345
8	21¾	5	12	2	17¼	12½	576	7	485	7	485	533
10	26½	6½	12	2½	21¼	16½	1068	9	925	9	925	1025
12	30	7¼	12	2⅞	24⅞	18¼	1608	10	1300	10	1300	1464

A.S.A. AND B.S.T. FLANGE TABLES

PIPE OR VALVE SIZE — ½"

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125					
ASA 150	3½	13/32	2⅜	4	½
ASA 300	3¾	9/16	2⅝	4	½
ASA 600	3¾	9/16	2⅝	4	½
ASA 900	4¼	⅝	3¼	4	¾
ASA1500	4¼	⅝	3¼	4	¾
BST A	3¼		2⅝	4	½
BST B	3¼	⅜	2⅝	4	½
BST C	3¼	⅜	2⅝	4	½
BST D	3¼	⅜	2⅝	4	½
BST E	3¼	⅜	2⅝	4	½
BST F	3¼	⅜	2⅝	4	½
BST H	4½	½	3¼	4	⅝
BST J	4½	⅝	3¼	4	⅝
BST K	4½	½	3¼	4	⅝
BST R	4½	¼	3¼	4	⅝
BST S	5	⅝	3½	4	¾
BST T	5½	1	4	4	¾

PIPE OR VALVE SIZE — ¾"

Type of Flange	Diameter of Flange	Thickness of Flange	P.C.D. of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125					
ASA 150	3⅞	13/32	2¾	4	½
ASA 300	4⅝	⅝	3¼	4	⅝
ASA 600	4⅝	⅝	3¼	4	⅝
ASA 900	5¼	1	3½	4	¾
ASA1500	5¼	1	3½	4	¾
BST A	3¾		2⅝	4	½
BST B	4	⅜	2⅝	4	½
BST C	4	⅜	2⅝	4	½
BST D	4	⅜	2⅝	4	½
BST E	4	⅜	2⅝	4	½
BST F	4	⅜	2⅝	4	½
BST H	4½	½	3¼	4	⅝
BST J	4½	⅝	3¼	4	⅝
BST K	4½	¾	3¼	4	⅝
BST R	4½	¾	3¼	4	⅝
BST S	5	⅞	3½	4	¾
BST T	5½	1	4	4	¾

PIPE OR VALVE SIZE — 1"

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	4¼		3⅛	4	½
ASA 150	4¼	7/16	3⅛	4	½
ASA 300	4⅛	11/16	3¼	4	⅝
ASA 600	4⅛	11/16	3¼	4	⅝
ASA 900	5⅛	1⅛	4	4	⅞
ASA1500	5⅛	1⅛	4	4	⅞
BST A	4½		3¼	4	½
BST B	4½	⅜	3¼	4	½
BST C	4½	⅜	3¼	4	½
BST D	4½	⅜	3¼	4	½
BST E	4½	⅜	3¼	4	½
BST F	4¼	⅜	3⅛	4	⅝
BST H	4½	½	3⅛	4	⅝
BST J	4½	¼	3⅛	4	⅝
BST K	5	¼	3¼	4	⅝
BST R	5	⅜	3¼	4	⅝
BST S	5½	⅝	4	4	¾
BST T	5¾	1⅛	4¼	4	¾

PIPE OR VALVE SIZE — 1¼"

Type of Flange	Diameter of Flange	Thickness of Flange	P.C.D. of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	4⅝		3½	4	½
ASA 150	4⅝	½	3½	4	½
ASA 300	5¼	¾	3⅞	4	⅝
ASA 600	5¼	13/16	3⅞	4	⅝
ASA 900	6¼	1⅛	4⅜	4	⅞
ASA1500	6¼	1⅛	4⅜	4	⅞
BST A	4¾		3⅞	4	½
BST B	4¾	½	3 15/16	4	½
BST C	4¾	½	3 15/16	4	½
BST D	4¾	½	3 15/16	4	½
BST E	4¾	½	3 15/16	4	½
BST F	5¼	½	3⅞	4	⅝
BST H	5¼	11/16	3⅞	4	⅝
BST J	5¼	¾	3⅞	4	⅝
BST K	5¼	⅞	3⅞	4	⅝
BST R	5¼	⅞	3⅞	4	⅝
BST S	5¾	1⅛	4¼	4	¾
BST T	6¼	1¼	4¾	4	⅞

PIPE OR VALVE SIZE — 1½"

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	5		3⅞	4	½
ASA 150	5	9/16	3⅞	4	½
ASA 300	6⅛	13/16	4½	4	¾
ASA 600	6⅛	⅞	4½	4	¾
ASA 900	7	1⅛	4⅞	4	1
ASA1500	7	1¼	4⅞	4	1
BST A	5¼		3⅞	4	½
BST B	5¼	½	3⅞	4	½
BST C	5¼	½	3⅞	4	½
BST D	5¼	½	3⅞	4	½
BST E	5¼	½	3⅞	4	½
BST F	5½	½	4⅛	4	⅝
BST H	5½	11/16	4⅛	4	⅝
BST J	5½	⅞	4⅛	4	⅞
BST K	6	1	4½	4	¾
BST R	6	1	4½	4	¾
BST S	6¼	1⅛	4¾	4	¾
BST T	6¼	1⅜	5¼	8	¾

PIPE OR VALVE SIZE — 2"

Type of Flange	Diameter of Flange	Thickness of Flange	P.C.D. of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	6		4¾	4	¾
ASA 150	6	⅝	4¾	4	¾
ASA 300	6½	⅞	5	8	⅝
ASA 600	6½	1	5	8	⅝
ASA 900	8½	1½	6½	8	⅞
ASA1500	8½	1½	6½	8	⅞
BST A	6		4½	4	⅝
BST B	6	½	4½	4	⅝
BST C	6	9/16	4½	4	⅝
BST D	6	9/16	4½	4	⅝
BST E	6	9/16	4½	4	⅝
BST F	6½	⅝	5	4	⅝
BST H	6½	¾	5	4	⅝
BST J	6½	1	5	4	¾
BST K	6½	1	5	8	⅝
BST R	6½	1	5	8	⅝
BST S	6¾	1¼	5¼	8	¾
BST T	7¼	1⅜	5¾	8	¾

A.S.A. AND B.S.T. FLANGE TABLES

PIPE OR VALVE SIZE — 2½"

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	7		5½	4	⅝
ASA 150	7	11/16	5½	4	⅝
ASA 300	7½	1	5⅞	8	¾
ASA 600	7½	1⅛	5⅞	8	¾
ASA 900	9⅜	1⅝	7½	8	1
ASA1500	9⅜	1⅝	7½	8	1
BST A	6½		5	4	⅝
BST B	6½	½	5	4	⅝
BST C	6½	9/16	5	4	⅝
BST D	6½	9/16	5	4	⅝
BST E	6½	9/16	5	4	⅝
BST F	7¼	⅝	5¾	8	⅝
BST H	7¼	¾	5¾	8	⅝
BST J	7¼	1	5¾	8	¾
BST K	7¼	1⅛	5¾	8	¾
BST R	7¼	1⅛	5¾	8	¾
BST S	7¼	1¼	5¾	8	¾
BST T	8	1⅛	6½	8	⅞

PIPE OR VALVE SIZE — 3"

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	7½		6	4	¾
ASA 150	7½	¾	6	4	⅝
ASA 300	8¼	1⅛	6⅝	8	¾
ASA 600	8¼	1½	6⅝	8	¾
ASA 900	9½	1½	7½	8	⅞
ASA1500	10½	1⅞	8	8	1⅛
BST A	7¼		5¾	4	⅝
BST B	7¼	9/16	5¾	4	⅝
BST C	7¼	9/16	5¾	4	⅝
BST D	7¼	9/16	5¾	4	⅝
BST E	7¼	9/16	5¾	4	⅝
BST F	8	⅝	6½	8	⅝
BST H	8	⅞	6½	8	⅝
BST J	8	1¼	6½	8	¾
BST K	8	1¼	6½	8	¾
BST R	8	1½	6½	8	¾
BST S	8	1⅜	6½	8	⅞
BST T	9¼	1⅞	7½	8	1

PIPE OR VALVE SIZE — 3½"

Type of Flange	Diameter of Flange	Thickness of Flange	P.C.D. of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	8½		7	8	⅝
ASA 150	8½	13/16	7	8	⅝
ASA 300	9	1⅜	7¼	8	⅞
ASA 600	9	1⅜	7¼	8	⅞
ASA 900					
ASA1500					
BST A	8		6½	4	⅝
BST B	8	9/16	6½	4	⅝
BST C	8	9/16	6½	4	⅝
BST D	8	9/16	6½	4	⅝
BST E	8	9/16	6½	8	⅝
BST F	8½	¾	7	8	⅝
BST H	8½	⅞	7	8	⅝
BST J	8½	1¼	7	8	¾
BST K	9	1¼	7¼	8	⅞
BST R	9	1¼	7¼	8	⅞
BST S	9¼	1½	7½	8	⅞
BST T	10½	2⅛	8½	8	1⅛

PIPE OR VALVE SIZE — 4"

Type of Flange	Diameter of Flange	Thickness of Flange	P.C.D. of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	9		7½	8	⅝
ASA 150	9	15/16	7½	8	⅝
ASA 300	10	1½	7⅞	8	¾
ASA 600	10¾	1½	8½	8	⅞
ASA 900	11½	1⅝	9¼	8	1⅛
ASA1500	12¼	2⅛	9½	8	1¼
BST A	8½		7	4	⅝
BST B	8½	9/16	7	4	⅝
BST C	8½	11/16	7	4	⅝
BST D	8½	11/16	7	4	⅝
BST E	8½	11/16	7	8	⅝
BST F	9	¾	7½	8	⅝
BST H	9	1	7½	8	⅝
BST J	9	1⅛	7½	8	¾
BST K	9½	1⅛	7¾	8	⅞
BST R	9½	1⅛	7¾	8	⅞
BST S	9¾	1⅛	8	8	1
BST T	11¼	2¼	9¼	8	1⅛

PIPE OR VALVE SIZE — 5"

Type of Flange	Diameter of Flange	Thickness of Flange	P.C.D. of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	10		8½	8	¾
ASA 150	10	15/16	8½	8	¾
ASA 300	11	1⅜	9¼	8	¾
ASA 600	13	1¾	10½	8	1
ASA 900	13¾	2	11	8	1¼
ASA1500	14¾	2⅛	11½	8	1½
BST A	10		8¼	4	⅞
BST B	10	⅝	8¼	8	⅞
BST C	10	11/16	8¼	8	⅞
BST D	10	11/16	8¼	8	⅞
BST E	10	11/16	8¼	8	⅞
BST F	11	⅞	9¼	8	¾
BST H	11	1⅛	9¼	8	¾
BST J	11	1½	9¼	8	⅞
BST K	11	1⅝	9¼	12	⅞
BST R	11	1⅝	9¼	12	⅞
BST S	11¼	1¾	9¼	12	⅞
BST T	12¾	2⅛	10⅜	12	1⅛

PIPE OR VALVE SIZE — 6"

Type of Flange	Diameter of Flange	Thickness of Flange	P.C.D. of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	11		9½	8	¾
ASA 150	11	1	9½	8	¾
ASA 300	12½	1 7/16	10⅝	12	¾
ASA 600	14	1⅞	11½	12	1
ASA 900	15	2 3/16	12½	12	1⅛
ASA1500	15½	3¼	12½	12	1⅜
BST A	11		9¼	4	⅞
BST B	11	⅝	9¼	8	⅞
BST C	11	11/16	9¼	8	⅞
BST D	11	11/16	9¼	8	⅞
BST E	11	11/16	9¼	8	⅞
BST F	12	⅞	10¼	12	¾
BST H	12	1⅛	10¼	12	¾
BST J	12	1½	10¼	12	⅞
BST K	12	1⅝	10¼	12	⅞
BST R	12	1¾	10¼	12	⅞
BST S	12¾	2	10⅜	12	1
BST T	14¾	2⅛	12½	12	1¼

A.S.A. AND B.S.T. FLANGE TABLES

PIPE OR VALVE SIZE — 8″

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	13½		11¾	8	¾
ASA 150	13½	1 1/8	11¾	8	¾
ASA 300	15	1 5/8	13	12	¾
ASA 600	16½	2 5/16	13¾	12	1 1/8
ASA 900	18½	2½	15½	12	1 1/8
ASA1500	19	3 3/8	15½	12	1 3/8
BST A	13¼		11½	8	⅞
BST B	13¼	1 1/16	11½	8	⅞
BST C	13¼	¼	11½	8	⅞
BST D	13¼	¼	11½	8	⅞
BST E	13¼	¼	11½	8	⅞
BST F	14½	1	12¾	12	⅞
BST H	14½	1¼	12¾	12	⅞
BST J	14½	1 3/8	12¾	12	⅞
BST K	14½	1 3/8	12½	12	1
BST R	14½	2	12¾	12	1
BST S	16¼	2½	14	12	1 1/8
BST T	18¼	3½	16	12	1 3/8

PIPE OR VALVE SIZE — 10″

Type of Flange	Diameter of Flange	Thickness of Flange	P.C.D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	16		14¼	12	⅞
ASA 150	16	1 1/16	14¼	12	⅞
ASA 300	17½	1 1/8	15¼	16	1
ASA 600	20	2½	17	16	1 1/4
ASA 900	21½	2¼	18½	16	1 3/8
ASA1500	23	4¼	19	12	1 7/8
BST A	16		14	8	¾
BST B	16	¾	14	8	¾
BST C	16	¾	14	8	¾
BST D	16	¾	14	8	¾
BST E	16	⅞	14	12	¾
BST F	17	1	15	12	⅞
BST H	17	1 1/8	15	12	⅞
BST J	17	1 1/8	15	12	1
BST K	17	2	15	16	1
BST R	17	2¼	15¼	16	1
BST S	19	2 3/8	16¼	16	1¼
BST T	22	4¼	19¼	16	1½

PIPE OR VALVE SIZE — 12″

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	19		17	12	1
ASA 150	19	1¼	17	12	1
ASA 300	20½	2	17¾	16	1 1/8
ASA 600	22	2 3/8	19¼	20	1 1/4
ASA 900	24	3 1/8	21	20	1 3/8
ASA1500	26½	4 1/8	22½	16	2
BST A	18		16	8	⅞
BST B	18	¾	16	12	⅞
BST C	18	1	16	12	⅞
BST D	18	⅞	16	12	⅞
BST E	18	1	16	12	⅞
BST F	19¼	1 1/8	17¼	16	⅞
BST H	19¼	1½	17¼	16	⅞
BST J	19¼	2	17¼	16	1
BST K	19¾	2¼	17	16	1 1/8
BST R	20	2½	18	16	1 3/8
BST S					
BST T					

PIPE OR VALVE SIZE — 14″

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	21		18¾	12	1
ASA 150	21	1 1/8	18¾	12	1
ASA 300	23	2 1/8	20¼	20	1 1/8
ASA 600	23¾	2 1/4	20¾	20	1 3/8
ASA 900	25¼	3 1/8	22	20	1½
ASA1500	29½	5¼	25	16	2¼
BST A	20¼		18½	8	⅞
BST B	20¾	⅛	18½	12	⅞
BST C	20¾	1	18½	12	⅞
BST D	20¾	1	18½	12	⅞
BST E	20¾	1	18½	12	⅞
BST F	21¾	1¼	19½	16	1
BST H	21¾	1⅜	19½	16	1
BST J	21¾	2⅛	19½	16	1 1/8
BST K	22½	2⅛	20	16	1¼
BST R	23	2¼	20¼	16	1¼
BST S					
BST T					

PIPE OR VALVE SIZE — 16″

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	23½		21¼	16	1
ASA 150	23½	1 1/16	21¼	16	1
ASA 300	25½	2⅛	22½	20	1¼
ASA 600	27	3	23¾	20	1½
ASA 900	27¾	3½	24¼	20	1⅝
ASA1500	32½	5¼	27¾	16	2½
BST A	22¼		20½	12	⅞
BST B	22¾	⅛	20½	12	⅞
BST C	22¾	1	20½	12	⅞
BST D	22¾	1	20½	12	⅞
BST E	22¾	1	20½	12	⅞
BST F	24	1⅛	21¾	20	1
BST H	24	1¼	21¾	20	1
BST J	24	2⅛	21¾	20	1⅛
BST K	24¼	2⅜	22¼	20	1¼
BST R	25¼	3	23	20	1¼
BST S					
BST T					

PIPE OR VALVE SIZE — 18″

Type of Flange	Diameter of Flange	Thickness of Flange	P C D of Bolt Centres	Number of Bolts	Size of Bolts
ASA 125	25		22¾	16	1⅛
ASA 150	25	1 1/16	22¾	16	1⅛
ASA 300	28	2⅜	24¾	24	1¼
ASA 600	29¼	3¼	25¾	20	1⅜
ASA 900	31	4	27	20	1⅞
ASA1500	36	6⅛	30½	16	2¾
BST A	25¼		23	12	⅞
BST B	25¼	1	23	12	⅞
BST C	25¼	1⅛	23	12	⅞
BST D	25¼	1⅛	23	12	⅞
BST E	25¼	1⅛	23	16	⅞
BST F	26½	1⅛	24	20	1⅛
BST H	26½	1⅛	24	20	1⅛
BST J	26½	2⅛	24	20	1¼
BST K					
BST R					
BST S					
BST T					

COCKS — CHROME PLATED

"Superstyle" Pattern for Hot and Cold Water

PILLAR COCK
B.S.P. Size ½"
L50

L51
BIB COCK
B.S.P. Size ½"

RECESS SHOWER COCK
B.S.P. Size ½"
Capillary Sizes —
½" × ½" ⅝" × ½"
⅝" × ⅝" ¾" × ½"
¾" × ⅝" ¾" × ¾"
Also available with
L Cock Body or
T Cock Body
L52

WASHING MACHINE COCK
½" Male B.S.P. Inlet x
¾" Male B.S.P. Outlet
To suit ½" Hose Connection
L53

RIGHT ANGLE
SHOWER COCK
M & F
B.S.P. Size ½"
L55

L54
HOSE COCK
B.S.P. Size ½"

EXPOSED
SHOWER COCK
B.S.P. Size ½"
L56

L57
CISTERN COCK
Elbow Union
B.S.P. Size ½"

L58
CISTERN COCK
Straight Union
B.S.P. Size ½"

L59
RIGHT ANGLE
SHOWER COCK F & F
B.S.P. Size ½"

L60
METER OR M & F
SHOWER COCK
B.S.P. Size ½"

Easy Clean Pattern for Hot and Cold Water

PILLAR COCK
B.S.P. Size ½"
L61

BIB COCK
B.S.P. Size ½"
L62

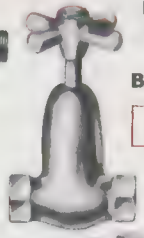
RECESS SHOWER COCKS
B.S.P. Size ½"
Capillary Sizes —
½" × ½" ⅝" × ½"
⅝" × ⅝" ¾" × ½"
¾" × ⅝" ¾" × ¾"
Also available with
L Cock Body or
T Cock Body
L63

WASHING MACHINE COCK
½" Male B.S.P. Inlet x
¾" Male B.S.P. Outlet
To suit ½" Hose Connection

L64

L65

RIGHT ANGLE
SHOWER COCK M & F
B.S.P. Size ½"
L66

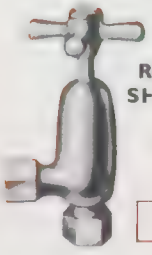


EXPOSED
SHOWER
COCK
B.S.P. Size ½"
L67

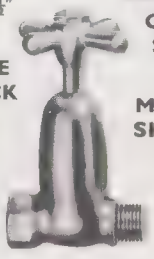
HOSE COCK
B.S.P. Size ½"
L68

L69
CISTERN COCK
Straight Union
B.S.P. Size ½"

CISTERN COCK
Elbow Union
B.S.P. Size ½"



RIGHT ANGLE
SHOWER COCK
F & F
B.S.P. Size ½"
L70



METER OR M & F
SHOWER COCK
B.S.P. Size ½"
L71

COCKS CHROME PLATED—SPRING ACTION

L72

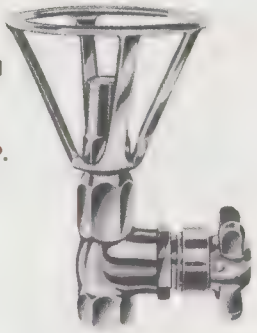
PILLAR COCK
Size ½″ B.S.P.

L73

BIB COCK
Size ½″ & ¾″ B.S.P.

BUBBLER COCKS

Plain	With Guard
L74	L75
Size ½″ B.S.P.	Size ½″ B.S.P.



L76

EXPOSED SHOWER COCK
Size ½″ B.S.P.

L77

FOOT ACTION COCK
Size ½″ B.S.P.

COCKS T HEAD HIGH PRESSURE—BRASS AND CHROME PLATED

BIB COCK

L78

B.S.P. Sizes

Polished Brass ½″, ¾″ × ⅝″, 1″, 1¼″, 1½″, 2″

Chrome Plated ½″, ¾″ × ⅝″, 1″, 1¼″, 1½″, 2″

SHOWER COCK

L79

B.S.P. Sizes

Rough Brass ½″, ¾″, 1″, 1¼″, 1½″, 2″, 2½″, 3″

Polished Brass ½″, ¾″, 1″, 1¼″, 1½″, 2″

Chrome Plated ½″, ¾″, 1″

Capillary Sizes

Rough Brass ½″, ⅝″, ¾″, ¾″ fullway body

CISTERN COCK
Straight or Elbow Union

B.S.P. Sizes

Rough Brass ½″, ¾″ × ½″

Chrome Plated ½″, ¾″ × ½″

L80

Capillary Sizes

Rough Brass ½″, ¾″ × ½″
¾″ × ½″ — ¾″ inlet x ½″ outlet

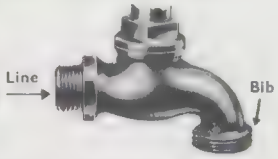
HOSE COCK

B.S.P. Sizes

Rough Brass ½″, ¾″ × ⅝″, 1″, 1¼″, 1½″, 2″

Polished Brass ½″, ¾″ × ⅝″, 1″

Chrome Plated ½″, ¾″ × ⅝″, 1″



L81

L82

INVERTED HOSE COCK

B.S.P. Sizes

Rough Brass ½″, ¾″ × ⅝″

L83

METER COCK
or M & F Shower Cock

B.S.P. Sizes

Rough Brass ½″, ¾″, 1″ × ¾″, 1″, 1¼″, 1½″, 2″

Chrome Plated ½″

Rough Brass ¾″ B.S.P. x ¾″ Capillary Right Angle 1″ x ¾″ 1″ inlet ¾″ outlet

Line Connection	½″	¾″ × ⅝″	1″	1¼″	1½″	2″
Bib Connection for Nut and Tail	¾″	1″	1¼″	1½″	2″	2¼″

Replacement Leather or Fibre Washers and Jumper Valves

Cock Size B.S.P.	½″	¾″ × ⅝″	¾″ fullway	1″	1½″	2″
Diameter	¾″	⅞″	1″	1¼″	1⅞″	2⅜″

L84

PATH COCK

B.S.P. Sizes

Rough Brass ¾″, 1″ × ¾″, 1″, 1¼″, 1½″, 2″, 2½″, 3″, 4″
1″ × ¾″, 1″ inlet x ¾″ outlet

MAIN COCK & ELBOW

L85

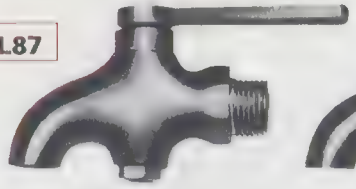
Rough Brass
B.S.P. Sizes

Inlet	Outlet
¾″	¾″
¾″	1″
1″	1″
1″	1¼″
1″	1½″

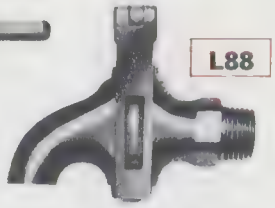
LOW PRESSURE TANK COCKS

Polished Brass or Chrome Plated B.S.P. Sizes ½", ¾", 1"

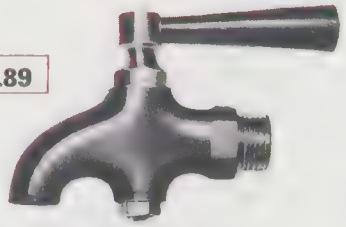
L86 T. HEAD



L87 LOOSE LEVER



L88 LOCKING LEVER



L89 PLASTIC HANDLE

L90 HOSE COCK

B.S.P. Sizes

Bib.	Line
¾"	½"
¾"	¾"
1"	¾"
1"	1"
1¼"	1"

L91 STOP COCK M & F

L92 STOP COCK F & F

BALL COCKS

L93 CROYDON PATTERN

MODELS FOR HIGH OR LOW PRESSURE

Rough Brass

B.S.P. Size	½"	¾"	1"	1¼"	1½"	2"
Dia. of Float	4½"	5"	6"	8"	9"	10"

L94 SYDNEY PATTERN

Rough Brass. B.S.P. Size ½"

FOR HIGH PRESSURE ONLY

LAMBERT PATTERN

MODELS FOR HIGH OR LOW PRESSURE

L95

Rough Brass

B.S.P. Size	1¼"	1½"	2"	2½"	3"	4"
Dia. of Float	8"	9"	12"	12" x 15"	12" x 16"	12" x 20"

L96 PHILMAC PATTERN

UNIVERSAL

FOR HIGH OR LOW PRESSURE

Brass

B.S.P. Size	⅜"	½"	¾"	1"	1¼"	1½"	2"
Dia. of Float	2½"	4½"	6"	6"	7"	8"	10"

Stainless Steel

B.S.P. Size	½"	¾"	1"	1¼"	1½"	2"
Dia. of Float	5"	5"	5"	9"	9"	9"

BALL COCK FLOATS

Copper

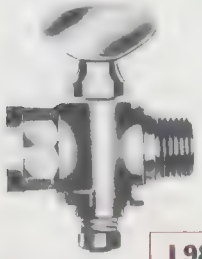
2½", 4½", 6", 7", 8", 9", 10", 12", 12" x 15", 12" x 16", 12" x 20"

Plastic

2½", 4½", 6"

L97

GAS COCKS



L98

B.S.P. Sizes

Brass ¼", ⅜", ½", ¾", 1", 1¼", 1½", 2"

Chrome Plated ¼", ⅜", ½", ¾", 1"

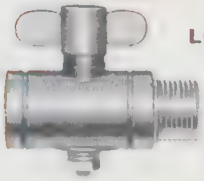
TUBE COCKS

Lever Type — Brass

B.S.P. Sizes ⅛", ¼", ⅜", ½"

L99 Male

Female L100



LOW PRESSURE STOP COCKS

T. Head — Brass

B.S.P. Sizes ⅛", ¼", ⅜"

M & F L101

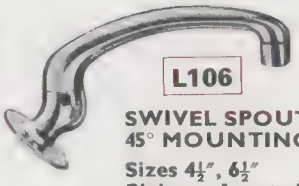
F & F L102

FITTINGS — CHROME PLATED

L103
SWIVEL SPOUT OVERSLUNG
Sizes 4½″, 6½″
Plain or Aerated

L104
SWIVEL SPOUT UNDERSLUNG
Sizes 4½″, 6½″
Plain or Aerated

L105
SWIVEL SPOUT HOB TYPE
Sizes 4½″, 6½″
Plain or Aerated



L106
SWIVEL SPOUT 45° MOUNTING
Sizes 4½″, 6½″
Plain or Aerated

FIXED SPOUT L107
Sizes 4½″, 6″, 7″, 8″, 9″
Plain

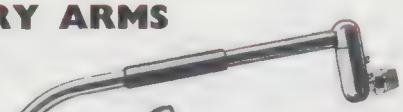
L110 SERVICE NUTS
½″ B.S.P.
Brass or Chrome Plated

L111 SERVICE RUBBER
To suit ½″ Tube.
Also in Nylon.

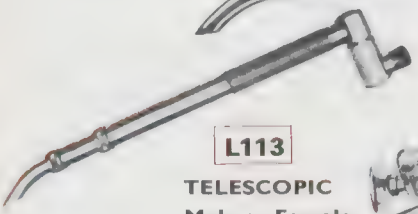
L108
EXTENSION PIECES
½″ B.S.P. x 1″, 1½″, 2″, 2½″, 3″, 3½″, 4″, 4½″, 5″, 6″
¾″ B.S.P. x 2″, 2½″, 3″, 3½″, 4″, 4½″, 5″, 6″

L109
BASIN CONNECTORS
Copper or Chrome Plated
Sizes ½″ B.S.P. x 12″

LAUNDRY ARMS



SINGLE
Male or Female
Sizes 6″, 9″, 12″, 15″



L112

L113
TELESCOPIC
Male or Female
Sizes 18″, 24″, 30″

L114
FOLDING
Male or Female
Sizes 24″, 30″, 36″

SHOWER ROSES

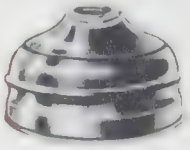
L115
BALL JOINT ROSE
2¼″ x ½″ Female B.S.P.

L116
BALL JOINT ANTI-SPLASH
3″, 3½″, 4″, x ½″ Female B.S.P.

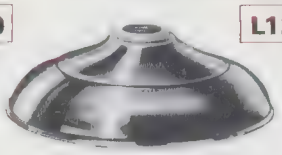
L117
BALL JOINT PLAIN
3″, 3½″ x ½″ Female B.S.P.

L118
COPPER FINISH
Fixed Plain
6″ x ½″ Female B.S.P.
6″ x ¾″ Female B.S.P.

L119
FIXED ROSE
2¼″ x ½″ Female B.S.P.



L120
FIXED ANTI-SPLASH
3″, 3½″, 4″, 6″, x ½″ Female B.S.P.



L121
FIXED PLAIN
4″, 6″ x ½″ Female B.S P.
6″ x ¾″ Female B.S.P.

L122
SHOWER BREECHING PIECE
Screwed ½″ B.S.P.

L123
SUPER SPRAY DOUBLE ELBOW
Anti Splash or Plain ½″ Female B.S.P.

SHOWER ARMS

SWAN NECK
90 ½″ B.S.P. x 15″, 18″ L124

L125
45 ½″ B.S.P. x 5″, 6″, 7″, 9″, 12″

★ Chrome Plated Annealed Copper Tube in lengths as required.

WALL DOMES OR COVER PLATES — CHROME PLATED

L126

*Also available
$\frac{1}{2}$" Screwed B.S.P. x $\frac{1}{4}$" Rise
$\frac{1}{2}$" Screwed B.S.P. x $\frac{5}{8}$" Rise

	Dia.	Rise	Dia. of Hole
Small - Flat	$2\frac{5}{8}$"		$\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$", $\frac{13}{16}$", 1", $1\frac{1}{32}$"
Large - Flat	$3\frac{1}{2}$"		$1\frac{1}{4}$", $1\frac{1}{2}$", $1\frac{5}{8}$", $1\frac{7}{8}$", 2", $2\frac{5}{16}$"
No. 1	3"	$\frac{3}{8}$"	$\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$", $\frac{13}{16}$", 1", $1\frac{1}{32}$"
No. 2	$2\frac{3}{4}$"	$\frac{1}{2}$"	$\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$", $\frac{13}{16}$", 1", $1\frac{1}{32}$"
No. 3	$2\frac{3}{4}$"	$\frac{3}{4}$"	$\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$", $\frac{13}{16}$", 1", $1\frac{1}{32}$"
No. 4	$3\frac{1}{2}$"	$\frac{7}{8}$"	$1\frac{1}{4}$", $1\frac{1}{2}$", $1\frac{5}{8}$", $1\frac{7}{8}$", 2", $2\frac{5}{16}$"
No. 5	$2\frac{5}{8}$"	$\frac{7}{8}$"	$\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$", $\frac{13}{16}$", 1", $1\frac{1}{32}$"

L131

PEDESTAL CLIP
Sizes: $\frac{3}{8}$", $\frac{1}{2}$", $\frac{3}{4}$" O.D. of Tube

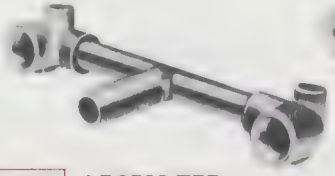
L127

RECESS TEES
Screwed $\frac{1}{2}$" B.S.P.

L128

RECESS TEES
Capillary
$\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$" O.D. Tube

L129



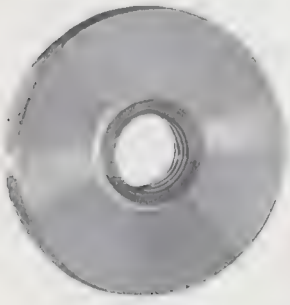
RECESS TEE
with Angle Bodies
8" & 12" Centres

L130

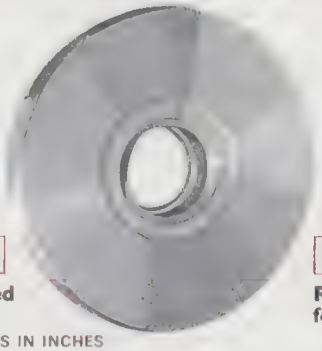
RECESS TEE
with Straight Bodies
8" & 12" Centres

BRAZING METAL FLANGES

TABLES OF BRITISH STANDARD FLANGES TO B.S.10, A.S.B.52



L132
Screwed



L133
Recess for Tube

DIMENSIONS IN INCHES

BOLT HOLES, drilled off centre lines, $\frac{1}{16}$ inch larger for $\frac{1}{2}$ inch and $\frac{5}{8}$ inch bolts, $\frac{1}{8}$ inch larger for other size bolts

B.S. Table D

O D Tube Size	Diam of Flange	Bolt Circle Diam.	No of Bolts	Diam of Bolts	Flange Thick-ness
$\frac{1}{2}$	$3\frac{3}{4}$	$2\frac{5}{8}$	4	$\frac{1}{2}$	$\frac{1}{4}$
$\frac{3}{4}$	4	$2\frac{7}{8}$	4	$\frac{1}{2}$	$\frac{1}{4}$
1	$4\frac{1}{2}$	$3\frac{1}{4}$	4	$\frac{1}{2}$	$\frac{5}{16}$
$1\frac{1}{4}$	$4\frac{3}{4}$	$3\frac{5}{16}$	4	$\frac{1}{2}$	$\frac{5}{16}$
$1\frac{1}{2}$	$5\frac{1}{4}$	$3\frac{7}{8}$	4	$\frac{1}{2}$	$\frac{3}{8}$
2	6	$4\frac{1}{2}$	4	$\frac{5}{8}$	$\frac{3}{8}$
$2\frac{1}{2}$	$6\frac{1}{2}$	5	4	$\frac{5}{8}$	$\frac{7}{16}$
3	$7\frac{1}{4}$	$5\frac{7}{8}$	4	$\frac{5}{8}$	$\frac{1}{2}$
$3\frac{1}{2}$	8	$6\frac{1}{2}$	4	$\frac{5}{8}$	$\frac{9}{16}$
4	$8\frac{1}{2}$	7	4	$\frac{5}{8}$	$\frac{5}{8}$
5	10	$8\frac{1}{4}$	8	$\frac{5}{8}$	$\frac{11}{16}$
6	11	$9\frac{1}{4}$	8	$\frac{5}{8}$	$\frac{11}{16}$
7	12	$10\frac{1}{4}$	8	$\frac{5}{8}$	$\frac{3}{4}$
8	$13\frac{1}{4}$	$11\frac{1}{2}$	8	$\frac{5}{8}$	$\frac{3}{4}$
9	$14\frac{1}{2}$	$12\frac{3}{4}$	8	$\frac{5}{8}$	$\frac{3}{4}$
10	16	14	8	$\frac{3}{4}$	$\frac{3}{4}$
12	18	16	12	$\frac{3}{4}$	$\frac{7}{8}$

B.S. Table E

O D Tube Size	Diam of Flange	Bolt Circle Diam	No of Bolts	Diam of Bolts	Flange Thick-ness
$\frac{1}{2}$	$3\frac{1}{4}$	$2\frac{5}{8}$	4	$\frac{1}{2}$	$\frac{1}{4}$
$\frac{3}{4}$	4	$2\frac{7}{8}$	4	$\frac{1}{2}$	$\frac{1}{4}$
1	$4\frac{1}{2}$	$3\frac{1}{4}$	4	$\frac{1}{2}$	$\frac{5}{16}$
$1\frac{1}{4}$	$4\frac{3}{4}$	$3\frac{5}{16}$	4	$\frac{1}{2}$	$\frac{5}{16}$
$1\frac{1}{2}$	$5\frac{1}{4}$	$3\frac{7}{8}$	4	$\frac{1}{2}$	$\frac{3}{8}$
2	6	$4\frac{1}{2}$	4	$\frac{5}{8}$	$\frac{3}{8}$
$2\frac{1}{2}$	$6\frac{1}{2}$	5	4	$\frac{5}{8}$	$\frac{7}{16}$
3	$7\frac{1}{4}$	$5\frac{7}{8}$	4	$\frac{5}{8}$	$\frac{1}{2}$
$3\frac{1}{2}$	8	$6\frac{1}{2}$	8	$\frac{5}{8}$	$\frac{9}{16}$
4	$8\frac{1}{2}$	7	8	$\frac{5}{8}$	$\frac{5}{8}$
5	10	$8\frac{1}{4}$	8	$\frac{5}{8}$	$\frac{11}{16}$
6	11	$9\frac{1}{4}$	8	$\frac{3}{4}$	$\frac{11}{16}$
7	12	$10\frac{1}{4}$	8	$\frac{3}{4}$	$\frac{3}{4}$
8	$13\frac{1}{4}$	$11\frac{1}{2}$	8	$\frac{3}{4}$	$\frac{3}{4}$
9	$14\frac{1}{2}$	$12\frac{3}{4}$	12	$\frac{3}{4}$	$\frac{13}{16}$
10	16	14	12	$\frac{3}{4}$	$\frac{7}{8}$
12	18	16	12	$\frac{7}{8}$	1

B.S. Table F

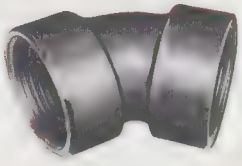
O D Tube Size	Diam of Flange	Bolt Circle Diam	No of Bolts	Diam of Bolts	Flange Thick-ness
$\frac{1}{2}$	$3\frac{1}{4}$	$2\frac{5}{8}$	4	$\frac{1}{2}$	$\frac{5}{16}$
$\frac{3}{4}$	4	$2\frac{7}{8}$	4	$\frac{1}{2}$	$\frac{5}{16}$
1	$4\frac{3}{4}$	$3\frac{5}{16}$	4	$\frac{5}{8}$	$\frac{3}{8}$
$1\frac{1}{4}$	$5\frac{1}{4}$	$3\frac{7}{8}$	4	$\frac{5}{8}$	$\frac{3}{8}$
$1\frac{1}{2}$	$5\frac{1}{2}$	$4\frac{1}{8}$	4	$\frac{5}{8}$	$\frac{7}{16}$
2	$6\frac{1}{2}$	5	4	$\frac{5}{8}$	$\frac{7}{16}$
$2\frac{1}{2}$	$7\frac{1}{4}$	$5\frac{3}{4}$	8	$\frac{5}{8}$	$\frac{1}{2}$
3	8	$6\frac{1}{2}$	8	$\frac{5}{8}$	$\frac{9}{16}$
$3\frac{1}{2}$	$8\frac{1}{2}$	7	8	$\frac{5}{8}$	$\frac{5}{8}$
4	9	$7\frac{1}{2}$	8	$\frac{5}{8}$	$\frac{11}{16}$
5	11	$9\frac{1}{4}$	8	$\frac{3}{4}$	$\frac{3}{4}$
6	12	$10\frac{1}{4}$	12	$\frac{3}{4}$	$\frac{7}{8}$
7	$13\frac{1}{4}$	$11\frac{1}{2}$	12	$\frac{3}{4}$	$\frac{7}{8}$
8	$14\frac{1}{2}$	$12\frac{3}{4}$	12	$\frac{3}{4}$	1
9	16	14	12	$\frac{7}{8}$	1
10	17	15	12	$\frac{7}{8}$	1
12	$19\frac{1}{4}$	$17\frac{1}{4}$	16	$\frac{7}{8}$	$1\frac{1}{8}$

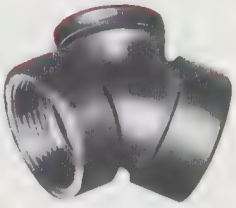
B.S. Table H

O D Tube Size	Diam of Flange	Bolt Circle Diam	No of Bolts	Diam of Bolts	Flange Thick-ness
$\frac{1}{2}$	$4\frac{1}{2}$	$3\frac{1}{4}$	4	$\frac{5}{8}$	$\frac{5}{8}$
$\frac{3}{4}$	$4\frac{1}{2}$	$3\frac{1}{4}$	4	$\frac{5}{8}$	$\frac{5}{8}$
1	$4\frac{3}{4}$	$3\frac{5}{16}$	4	$\frac{5}{8}$	$\frac{7}{16}$
$1\frac{1}{4}$	$5\frac{1}{4}$	$3\frac{7}{8}$	4	$\frac{5}{8}$	$\frac{7}{16}$
$1\frac{1}{2}$	$5\frac{1}{2}$	$4\frac{1}{8}$	4	$\frac{5}{8}$	$\frac{1}{2}$
2	$6\frac{1}{2}$	5	4	$\frac{5}{8}$	$\frac{1}{2}$
$2\frac{1}{2}$	$7\frac{1}{4}$	$5\frac{3}{4}$	8	$\frac{5}{8}$	$\frac{9}{16}$
3	8	$6\frac{1}{2}$	8	$\frac{5}{8}$	$\frac{5}{8}$
$3\frac{1}{2}$	$8\frac{1}{2}$	7	8	$\frac{5}{8}$	$\frac{11}{16}$
4	9	$7\frac{1}{2}$	8	$\frac{5}{8}$	$\frac{3}{4}$
5	11	$9\frac{1}{4}$	8	$\frac{3}{4}$	$\frac{7}{8}$
6	12	$10\frac{1}{4}$	12	$\frac{3}{4}$	1
7	$13\frac{1}{4}$	$11\frac{1}{2}$	12	$\frac{3}{4}$	$1\frac{1}{8}$
8	$14\frac{1}{2}$	$12\frac{3}{4}$	12	$\frac{3}{4}$	$1\frac{1}{4}$
9	16	14	12	$\frac{7}{8}$	$1\frac{1}{8}$
10	17	15	12	$\frac{7}{8}$	$1\frac{3}{8}$
12	$19\frac{1}{4}$	$17\frac{1}{4}$	16	$\frac{7}{8}$	$1\frac{1}{2}$

BRASS SEWERAGE FITTINGS — SCREWED B.S.P.

ELBOWS





L134 Plain

L135 Inspection Opening

Angles 45° 85° 88½°
BSP Sizes 1¼", 1½", 2", 2½" 3"
Also available 2" - 85° only
Union Elbow, Plain or Inspection Opening.
M & F Elbow, Plain or Inspection Opening

SOCKETS

L138

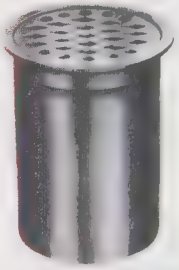
BSP Sizes 1¼", 1½", 2", 2½", 3"

FLAP VALVE

L139

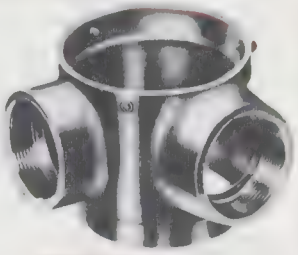
BSP Size 1¼", 1½", 2"

BRASS GULLY RISERS AND TRAPS



L144 GRATED GULLY RISER

Brass or Chrome Plated
BSP Size 4" x
Rise 4", 6", 9", 12", 15", 18", 24"

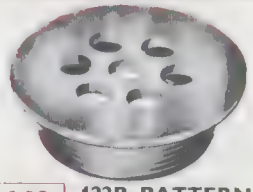


L145 GULLY INLET RISER

Brass or Chrome Plated
BSP Size
Single Branch 2", 2½", 3"
Double Branch 2"

L148 CUP PATTERN GRATE

Brass or Chrome Plated
Male or Female

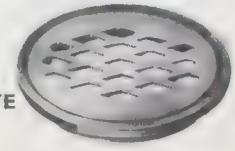


L149 122B PATTERN GRATE

Brass or Chrome Plated
Male or Female
BSP Size 1¼", 1½", 2"

L150 TRAPSCREW GRATE

Brass or Chrome Plated
Size 4"



ALSO AVAILABLE

Cast Iron Grates
Force Cups
Flush Pipes and Cones
Cistern Valves & Washers
Testing Plugs

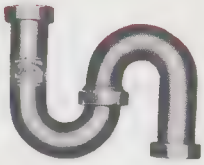
JUNCTIONS

L136 Plain

L137 Inspection Opening

Angles 45° 85° 88½°
BSP Sizes 1¼", 1½", 2", 2½", 3"

TRAPS



L140 S Trap

L142 S Trap

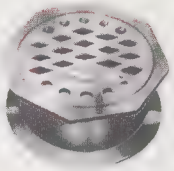
L141 P Trap

L143 P Trap

BRASS UNION TRAPS
Brass or Chrome Plated
BSP Sizes 1¼", 1½", 1½" x 1¼", 2"

COPPER UNIVERSAL
Copper or Chrome Plated
BSP Sizes 1¼", 1½" x 1¼", 1½", 2"

Also available
Extension Outlet Universal S Trap or P Trap.
Copper or Chrome Plated.
BSP Sizes 1¼", 1½" x 1¼", 1½", 2"
Length of Extension 6", 12", 18", 24"
Double Bowl Sink Connection (2" BSP x 10" or 12" Centres



L146 GULLEY TRAP

Male or Female
BSP Size 2", 2½", 3"

L147 DRAINER AND GRATE

Brass or Chrome Plated
Size 4"

CAPS AND LININGS

L151 IRON TO LEAD
BSP Size 1¼", 1½", 2", 2½", 3"

L152 MALE END
BSP Size 1¼", 1½", 2", 2½", 3"

L153 FEMALE END
BSP Size 1¼", 1½", 2"

L154 PLUG AND WASHER

Chrome Plated
Long body or short body
BSP Size 1¼", 1½"

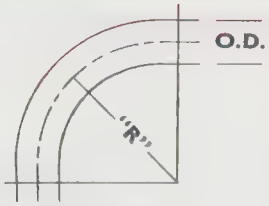
L155 PLUG AND WASHER

Chrome Plated
for Baths and S.S. Sinks
BSP Size 2"

"PEERFAB" BENDS

Standard 3D Bends
"R" = 3 x Size O.D.

Short Radius 2D Bends
"R" = 2 x Size O.D.



L156 PEARSON "3D" 90° COPPER BENDS
GENERAL DIMENSIONS

Tube Outside Dia.	Gauge S.W.G.	Centre Line Radius "R"	Length of Straight "L"	Weight in lbs.
2¼"	14	7	3"	3.35
3"	14	9	6"	6.14
4"	14	12	8"	9.80
4"	12	12	8"	12.67
4"	10	12	8"	15.50
5"	14	15	10"	17.80
5"	12	15	10"	23.20
5"	10	15	10"	28.30
6"	14	18	11"	23.90
6"	12	18	11"	30.90
6"	10	18	11"	37.90
7"	10	21	12"	54.00
8"	12	24	12"	49.75
8"	10	24	12"	61.00
8"	8	24	12"	76.00
9"	12	27	12"	65.40
9"	10	27	12"	80.20
9"	8	27	12"	100.04

Note: All ends can be supplied either M & M, M & F, or F & F.

L157 PEARSON "2D" SHORT RADIUS COPPER BENDS
GENERAL DIMENSIONS

Tube Outside Dia.	Gauge	Centre Line Radius "R"	Length of Straight "L"
2"	16 & 14	2⅜"	1"
2½"	16 & 14	3½"	1½"
3"	16-14-12	4½"	1½"
4"	16-14-12	6½"	1½"
5"	14–12–10	10"	3"
6"	14–12–10	10"	3"

All ends can be supplied M & M or F & F

PEARSON 90° STAINLESS STEEL BENDS

L158
TYPE 316 AS WELDED TUBE
TYPE 304 AS WELDED TUBE

Tube Outside Dia.	Gauge S.W.G.	Centre Line Radius "R"	Length of Straight "L"
1"	18 & 16	2½"	1"
1¼"	18 & 16	2½"	1"
1½"	18 & 16	3"	1"
2"	18 & 16	3½"	1"
2"	18 & 16	5"	1"
2½"	16 & 14	3½"	1½"
3"	16 & 14	4½"	1½"
3"	16 & 14	10"	1½"
4"	16 & 14	6½"	2"
4"	16 & 14	10"	2"

L159 CARRINGTON TESTED COPPER BENDS

Size O.D. of Tube	Gauge	Centreline Radius	Centre to end Dimension	Straight end	Weight in lbs.	
					90°	45°
1¼"	14	1½"	2½"	½"	6 oz.	3 oz.
1½"	12	2"	2½"	½"	10 0z.	7 oz.
2"	12	2½"	3½"	1½"	1 lb. 2 oz.	10 oz.
2½"	12	3½"	4½"	1½"	2 lb. 2 oz.	1 lb. 3 oz.
3"	12	4½"	5½"	1½"	3 lb.	1 lb. 11 oz.
4"	10	6½"	7½"	1½"	6 lb.	3 lb. 8 oz.

COPPER C.T.S. FITTINGS

L160 BENDS F & F
Angles 45°, 85°, 88½°, 90°
Plain or I.O. on request.
Sizes: 18 G 1½", 1½", 2"
16 G 2½", 3", 4"

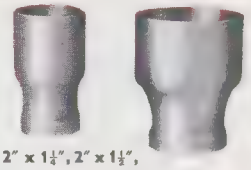
L161 BENDS M & F
Angles 45°, 85°, 88½°, 90
Plain or I.O. on request.
Sizes: 18 G 1½", 1½", 2"
16 G 2½", 3", 4"

L162 JUNCTION BEND
45° M & F
Sizes: 18 G 1½", 1½", 2"
16 G 2½", 3", 4"

L163 INVERTED JUNCTION BEND
135° M & F
Sizes: 18 G 1½", 1½", 2"
16 G 2½", 3", 4"

L164 SWEEP JUNCTION
ADAPTOR M & F
45°/85°
Sizes: 18 G 1½", 1½", 2"
16 G 2½", 3", 4"

L165 REDUCERS
Sizes: 1½" x 1½", 2" x 1½", 2" x 1½",
2½" x 1½", 2½" x 2", 3" x 1½", 3" x 2",
3" x 2½", 4" x 2", 4" x 2½", 4" x 3"



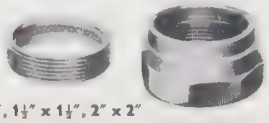
TRAPSCREWS

L166 SADDLE TYPE

L167 STANDARD

B.S.P. Size ¾", 1", 1½"
Tube Size 1½", 1½", 2".

L168 ADAPTORS
Male or Female



Sizes: 1½" x 1½", 1½" x 1½", 2" x 2"

Also Available

PAN COLLARS
PAN PIECES
CAP AND LINING
JUNCTIONS AND RISERS

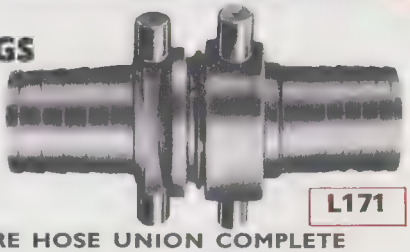
FIRE FIGHTING FITTINGS

FIRE HOSE COCK
SYDNEY PATTERN

Rt. Angle
L169

Straight
L170

2½″ 5-1/5 Thread
Inlet 2″ or 2½″ B.S.P.

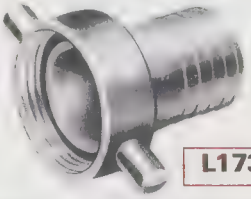


L171

FIRE HOSE UNION COMPLETE
For 2½″ hose 2½″ 5-1/5 Thread

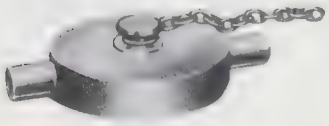
L172

FIRE HOSE MALE END
For 2½″ Hose
2½″ 5-1/5 Thread



L173

FIRE HOSE NUT AND TAIL
For 2½″ Hose
2½″ 5-1/5 Thread



L174 HYDRANT CAP
With Chain

L175 HYDRANT CAP
Plain
With 2½″ 5-1/5 Thread

L176 HYDRANT CAP
With Screwed Outlet
2½″ 5-1/5 Thread

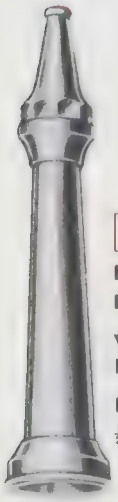
Outlet Size
B.S.P. ¾″, 1″, 1¼″, 1½″, 2″

L177

MATCHING PIECES
2½″ 5-1/5 Thread x 2″ B.S.P.
2½″ 5-1/5 Thread x 2½″ B.S.P.

L178

FIRE HOSE Y PIECE
2 Male ends with female
Union centre connection
2½″ 5-1/5 Thread



L179

FIRE HOSE DIRECTORS

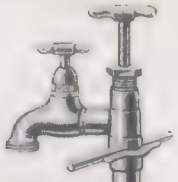
With detachable Nozzle

Nozzle Size
½″ diam. ⅝″ diam. ¾″ diam.

FIRE HYDRANT
2½″ 5-1/5 thread

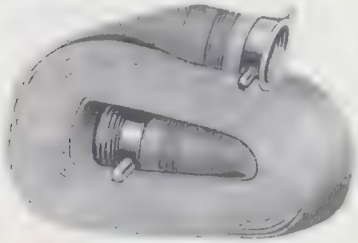
Single Head
L180

Double Head
L181



L182

STAND PIPE HYDRANT
2½″ 5-1/5 Thread



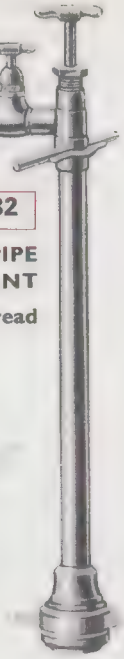
L183 CANVAS FIRE HOSE
Standard length 60 ft., 100 ft.
Available with Couplings if required

L184

FIRE HOSE CRADLE
Capacity 100 ft. 2½″ Canvas Hose with Director

L185

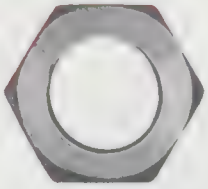
FIRE FIGHTING KEY



PIPE FITTINGS – BRASS IN B.S.P. SIZES

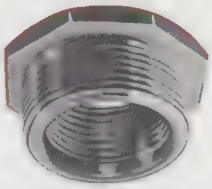
Hot Water Untested, or Water Board Tested as required

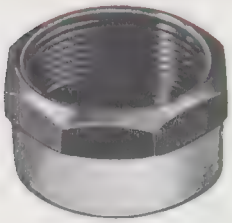
ADAPTOR


BACKNUT

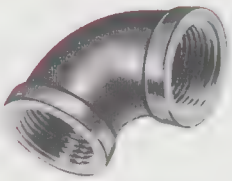
BEND M & F

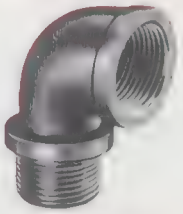
BEND F & F

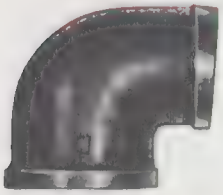

BUSH

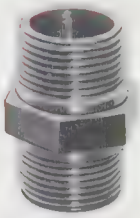

CAP

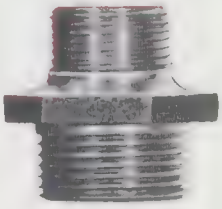
CROSS


ELBOW F & F

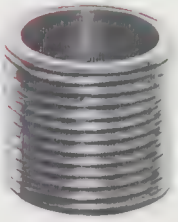

ELBOW M & F

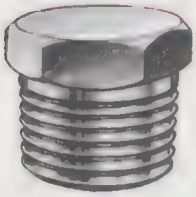

ELBOW REDUCING


HEXAGON NIPPLE


HEXAGON NIPPLE REDUCING

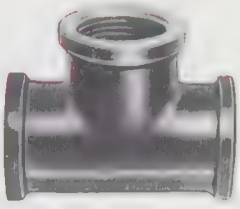
PLAIN NIPPLE ORDINARY


PLAIN NIPPLE X LENGTH


PLUG

SOCKET

SOCKET REDUCING

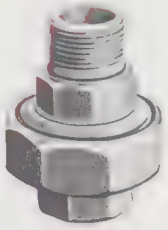

TEE

TEE REDUCING

UNION F & F

The above Fittings in Chrome Plated Finish are available as required.

Fittings Brass, in Brass Thread on application.


UNION M & F

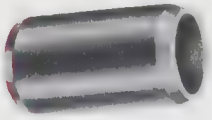
FITTINGS BRASS — B.S.P. SIZES — Hot Water Untested or as required Water Board Tested

	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
ADAPTORS	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
ADAPTORS REDUCING		1/4" x 1/8"	3/8" x 1/8"	1/2" x 1/8"	3/4" x 1/2"	1" x 1/2"	1 1/4" x 3/4"	1 1/2" x 1"	2" x 1 1/4"					
			3/8" x 1/4"	1/2" x 1/4"		1" x 3/4"	1 1/4" x 1"	1 1/2" x 1 1/4"	2" x 1 1/2"					
				1/2" x 3/8"										
BACKNUTS	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
BENDS M. & F.				1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
BENDS M. & F.				1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
BUSHES		1/4" x 1/8"	3/8" x 1/8"	1/2" x 1/8"	3/4" x 1/8"	1" x 1/4"	1 1/4" x 1/2"	1 1/2" x 1/2"	2" x 1/2"	2 1/2" x 1/2"	3" x 3/4"	4" x 1"		6" x 3"
			3/8" x 1/4"	1/2" x 1/4"	3/4" x 1/4"	1" x 3/8"	1 1/4" x 3/4"	1 1/2" x 3/4"	2" x 3/4"	2 1/2" x 3/4"	3" x 1"	4" x 1 1/4"		6" x 4"
				1/2" x 3/8"	3/4" x 3/8"	1" x 1/2"	1 1/4" x 1"	1 1/2" x 1"	2" x 1"	2 1/2" x 1"	3" x 1 1/4"	4" x 1 1/2"		
					3/4" x 1/2"	1" x 3/4"		1 1/2" x 1 1/4"	2" x 1 1/4"	2 1/2" x 1 1/4"	3" x 1 1/2"	4" x 2"		
									2" x 1 1/2"	2 1/2" x 1 1/2"	3" x 2"	4" x 2 1/2"		
										2 1/2" x 2"	3" x 2 1/2"	4" x 3"		
CAPS	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
CROSSES	1/8"	1/4"	3/8"	1/2"	3/4"	1"								
ELBOWS M. & F.	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"					
ELBOWS F. & F.	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
ELBOWS F. & F. REDUCING			3/8" x 1/4"	1/2" x 1/4"	3/4" x 1/2"	1" x 1/2"								
				1/2" x 3/8"		1" x 3/4"								
FLANGES				1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
NIPPLES HEXAGON	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		6"
NIPPLES HEX. REDUCING		1/4" x 1/8"	3/8" x 1/8"	1/2" x 1/8"	3/4" x 1/4"	1" x 1/2"	1 1/4" x 3/4"	1 1/2" x 1"	2" x 1 1/4"					
			3/8" x 1/4"	1/2" x 1/4"	3/4" x 3/8"	1" x 3/4"	1 1/4" x 1"	1 1/2" x 1 1/4"	2" x 1 1/2"					
				1/2" x 3/8"	3/4" x 1/2"									
NIPPLES PLAIN ORDINARY	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
NIPPLES PLAIN & LENGTH		1/4" x 1 1/2"	3/8" x 1 1/2"	1/2" x 1 1/2"										
		1/4" x 2"	3/8" x 2"	1/2" x 2"	3/4" x 2"	1" x 2"	1 1/4" x 2"	1 1/2" x 2"	2" x 2"					
		1/4" x 3"	3/8" x 3"	1/2" x 3"	3/4" x 3"	1" x 3"	1 1/4" x 3"	1 1/2" x 3"	2" x 3"					
		1/4" x 4"	3/8" x 4"	1/2" x 4"	3/4" x 4"	1" x 4"	1 1/4" x 4"	1 1/2" x 4"	2" x 4"					
		1/4" x 6"	3/8" x 6"	1/2" x 6"	3/4" x 6"	1" x 6"	1 1/4" x 6"	1 1/2" x 6"	2" x 6"					
		1/4" x 12"	3/8" x 12"	1/2" x 12"	3/4" x 12"	1" x 12"	1 1/4" x 12"	1 1/2" x 12"	2" x 12"					
PLUGS	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		6"
SOCKETS	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
SOCKETS REDUCING		1/4" x 1/8"	3/8" x 1/8"	1/2" x 1/4"	3/4" x 3/8"	1" x 1/2"								
			3/8" x 1/4"	1/2" x 3/8"	3/4" x 1/2"	1" x 3/4"								
TEES:	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
TEES REDUCING			3/8" x 1/4"	1/2" x 3/8"	3/4" x 1/2"	1" x 1/2"		1 1/2" x 1"	2" x 1 1/4"	2 1/2" x 2	3" x 2"	4" x 2 1/2"		
						1" x 3/4"		1 1/2" x 1 1/4"	2" x 1 1/2"			4" x 3"		
UNIONS F. & F.	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		
UNIONS M. & F.	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"		

TELEPHONE: 648 8501

"Yorkshire" AND "YORKWAY" CAPILLARY FITTINGS

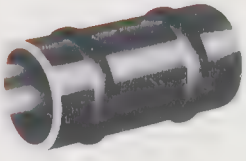
STRAIGHT COUPLINGS
Copper x Copper



No. 1 YORKSHIRE	No. W1 YORKWAY
3/8" O.D. both ends	5/16" O.D. both ends
1/2" O.D. both ends	3/8" O.D. both ends
5/8" O.D. both ends	1/2" O.D. both ends
3/4" O.D. both ends	5/8" O.D. both ends
1" O.D. both ends	3/4" O.D. both ends
1 1/4" O.D. both ends	1" O.D. both ends
1 1/2" O.D. both ends	1 1/4" O.D. both ends
2" O.D. both ends	1 1/2" O.D. both ends
	2" O.D. both ends

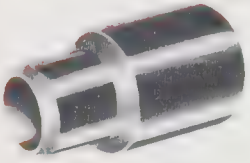
Available as Slip Fitting

STRAIGHT COUPLINGS
Copper x Copper

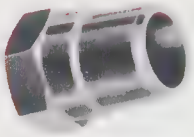


No. ICU YORKSHIRE
3/8" O.D. both ends
1/2" O.D. both ends
5/8" O.D. both ends
3/4" O.D. both ends
1" O.D. both ends
1 1/4" O.D. both ends

REDUCING COUPLINGS
Copper x Copper

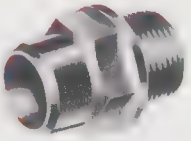


No. IR YORKSHIRE	No. WIR YORKWAY
1/8" O.D. x 3/8" O.D.	5/8" O.D. x 1/2" O.D.
5/8" O.D. x 1/2" O.D.	3/4" O.D. x 3/8" O.D.
3/4" O.D. x 5/8" O.D.	3/4" O.D. x 1/2" O.D.
3/4" O.D. x 1/2" O.D.	1" O.D. x 3/4" O.D.
1" O.D. x 3/4" O.D.	



STRAIGHT CONNECTORS
Copper x Female B.S.P. Thread

No. 2 YORKSHIRE	No. W2 YORKWAY
3/8" O.D. x 1/2" F.B.S.P.	1/2" O.D. x 3/4" F.B.S.P.
3/8" O.D. x 3/8" F.B.S.P.	1/2" O.D. x 1/2" F.B.S.P.
1/2" O.D. x 3/4" F.B.S.P.	5/8" O.D. x 3/4" F.B.S.P.
1/2" O.D. x 1/2" F.B.S.P.	5/8" O.D. x 1/2" F.B.S.P.
1/2" O.D. x 3/8" F.B.S.P.	3/4" O.D. x 3/4" F.B.S.P.
5/8" O.D. x 3/4" F.B.S.P.	3/4" O.D. x 1/2" F.B.S.P.
5/8" O.D. x 1/2" F.B.S.P.	1" O.D. x 1" F.B.S.P.
3/4" O.D. x 3/4" F.B.S.P.	1" O.D. x 3/4" F.B.S.P.
3/4" O.D. x 1/2" F.B.S.P.	1 1/4" O.D. x 1 1/4" F.B.S.P.
1" O.D. x 1" F.B.S.P.	1 1/2" O.D. x 1 1/2" F.B.S.P.
1" O.D. x 3/4" F.B.S.P.	2" O.D. x 2" F.B.S.P.
1 1/4" O.D. x 1 1/4" F.B.S.P.	
1 1/4" O.D. x 1" F.B.S.P.	
1 1/2" O.D. x 1 1/2" F.B.S.P.	
2" O.D. x 2" F.B.S.P.	
2" O.D. x 1 1/2" F.B.S.P.	



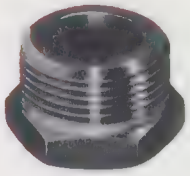
STRAIGHT CONNECTORS
Copper x Male B.S.P. Thread

No. 3 YORKSHIRE	No. W3 YORKWAY
3/8" O.D. x 1/2" M.B.S.P.	3/8" O.D. x 1/2" M.B.S.P.
3/8" O.D. x 3/8" M.B.S.P.	3/8" O.D. x 3/8" M.B.S.P.
3/8" O.D. x 1/4" M.B.S.P.	3/8" O.D. x 1/4" M.B.S.P.
1/2" O.D. x 3/4" M.B.S.P.	1/2" O.D. x 3/4" M.B.S.P.
1/2" O.D. x 1/2" M.B.S.P.	1/2" O.D. x 1/2" M.B.S.P.
1/2" O.D. x 3/8" M.B.S.P.	1/2" O.D. x 3/8" M.B.S.P.
1/2" O.D. x 1/4" M.B.S.P.	1/2" O.D. x 1/4" M.B.S.P.
5/8" O.D. x 3/4" M.B.S.P.	5/8" O.D. x 3/4" M.B.S.P.
5/8" O.D. x 1/2" M.B.S.P.	5/8" O.D. x 1/2" M.B.S.P.
3/4" O.D. x 3/4" M.B.S.P.	3/4" O.D. x 3/4" M.B.S.P.
3/4" O.D. x 1/2" M.B.S.P.	3/4" O.D. x 1/2" M.B.S.P.
1" O.D. x 1" M.B.S.P.	1" O.D. x 1" M.B.S.P.
1" O.D. x 3/4" M.B.S.P.	1" O.D. x 3/4" M.B.S.P.
1 1/4" O.D. x 1 1/4" M.B.S.P.	1 1/4" O.D. x 1 1/4" M.B.S.P.
1 1/4" O.D. x 1" M.B.S.P.	1 1/4" O.D. x 1" M.B.S.P.
1 1/2" O.D. x 1 1/2" M.B.S.P.	1 1/2" O.D. x 1 1/2" M.B.S.P.
1 1/2" O.D. x 1 1/4" M.B.S.P.	1 1/2" O.D. x 1 1/4" M.B.S.P.
2" O.D. x 2" M.B.S.P.	2" O.D. x 2" M.B.S.P.
2" O.D. x 1 1/2" M.B.S.P.	

"YORKSHIRE" AND "YORKWAY" CAPILLARY FITTINGS

BUSHES

Copper x Male B.S.P. Thread

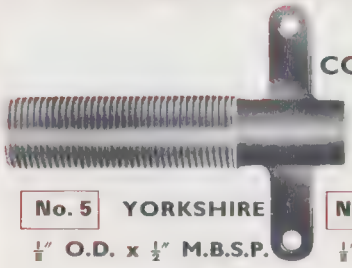


No. W4 YORKWAY only

- ½" O.D. x ¾" M.B.S.P.
- ½" O.D. x ½" M.B.S.P.
- ⅝" O.D. x ¾" M.B.S.P.
- ⅝" O.D. x ½" M.B.S.P.
- ¾" O.D. x ¾" M.B.S.P.

WINGED CONNECTORS

EXT. M.1.



No. 5 YORKSHIRE

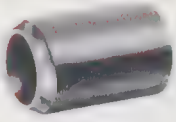
- ⅛" O.D. x ½" M.B.S.P.

No. W5 YORKWAY

- ⅛" O.D. x ½" M.B.S.P.

REDUCING PIECES

For insertion into copper ends of other "YORKSHIRE" Fittings



No. 6 YORKSHIRE	No. W6 YORKWAY
½" P.E. x ⅜" O.D.	½" P.E. x ⅜" O.D.
⅝" P.E. x ½" O.D.	⅝" P.E. x ½" O.D.
¾" P.E. x ⅝" O.D.	¾" P.E. x ⅝" O.D.
¾" P.E. x ½" O.D.	¾" P.E. x ½" O.D.
¾" P.E. x ¾" O.D.	1" P.E. x ¾" O.D.
1" P.E. x ¾" O.D.	1" P.E. x ⅝" O.D.
1" P.E. x ⅝" O.D.	1" P.E. x ½" O.D.
1" P.E. x ½" O.D.	1¼" P.E. x 1" O.D.
1¼" P.E. x 1" O.D.	1¼" P.E. x ¾" O.D.
1¼" P.E. x ¾" O.D.	1½" P.E. x 1¼" O.D.
1½" P.E. x 1¼" O.D.	1½" P.E. x 1" O.D.
1½" P.E. x 1" O.D.	2" P.E. x 1½" O.D.
2" P.E. x 1½" O.D.	2" P.E. x 1¼" O.D.
2" P.E. x 1¼" O.D.	

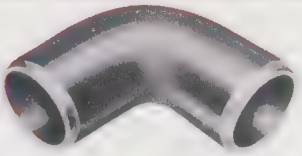
UNION CONNECTORS

Copper x Copper

No. 11 YORKSHIRE	No. W11 YORKWAY
⅜" O.D. both ends	⅜" O.D. both ends
½" O.D. both ends	½" O.D. both ends
⅝" O.D. both ends	⅝" O.D. both ends
¾" O.D. both ends	¾" O.D. both ends
1" O.D. both ends	1" O.D. both ends
1¼" O.D. both ends	1¼" O.D. both ends
1½" O.D. both ends	1½" O.D. both ends
2" O.D. both ends	2" O.D. both ends

ELBOWS

Copper x Copper



No. 12 YORKSHIRE

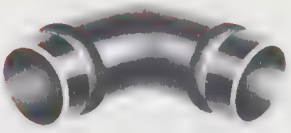
- ⅜" O.D. both ends
- ½" O.D. both ends
- ⅝" O.D. both ends
- ¾" O.D. both ends
- 1" O.D. both ends
- 1¼" O.D. both ends
- 1½" O.D. both ends
- 2" O.D. both ends

No. W12 YORKWAY

- ⅜" O.D. both ends
- ½" O.D. both ends
- ⅝" O.D. both ends
- ¾" O.D. both ends
- 1" O.D. both ends
- 1¼" O.D. both ends
- 1½" O.D. both ends
- 2" O.D. both ends

ELBOWS

Copper x Copper



No. 12CU

YORKSHIRE

- ½" O.D. both ends
- ⅝" O.D. both ends
- ¾" O.D. both ends
- 1" O.D. both ends

REDUCING ELBOWS

Copper x Copper

No. 12R YORKSHIRE

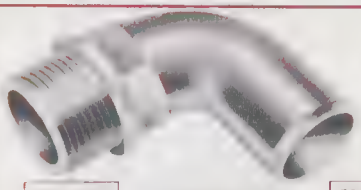
- ⅝" O.D. x ½" O.D.
- ¾" O.D. x ⅝" O.D.
- ¾" O.D. x ½" O.D.

No. W12R YORKWAY

- ⅝" O.D. x ½" O.D.
- ¾" O.D. x ⅝" O.D.
- ¾" O.D. x ½" O.D.

ELBOWS

Copper x Male B.S.P. Thread



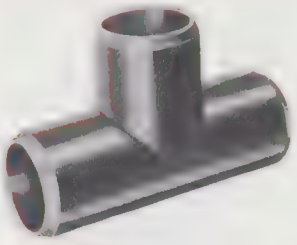
No. 13 YORKSHIRE	No. W13 YORKWAY
⅜" O.D. x ½" M.B.S.P.	⅜" O.D. x ½" M.B.S.P.
⅜" O.D. x ⅜" M.B.S.P.	⅜" O.D. x ⅜" M.B.S.P.
⅜" O.D. x ¼" M.B.S.P.	⅜" O.D. x ¼" M.B.S.P.
½" O.D. x ½" M.B.S.P.	½" O.D. x ½" M.B.S.P.
½" O.D. x ¼" M.B.S.P.	½" O.D. x ½" M.B.S.P.
⅝" O.D. x ½" M.B.S.P.	⅝" O.D. x ⅜" M.B.S.P.
¾" O.D. x ¾" M.B.S.P.	¾" O.D. x ½" M.B.S.P.
¾" O.D. x ½" M.B.S.P.	1" O.D. x 1" M.B.S.P.
1" O.D. x 1" M.B.S.P.	1" O.D. x ¾" M.B.S.P.
1" O.D. x ¾" M.B.S.P.	1¼" O.D. x 1¼" M.B.S.P.
1¼" O.D. x 1¼" M.B.S.P.	1½" O.D. x 1¼" M.B.S.P.
1¼" O.D. x 1" M.B.S.P.	2" O.D. x 2" M.B.S.P.
1½" O.D. x 1½" M.B.S.P.	2" O.D. x 1½" M.B.S.P.
1½" O.D. x 1¼" M.B.S.P.	
2" O.D. x 2" M.B.S.P.	
2" O.D. x 1½" M.B.S.P.	

"YORKSHIRE" AND "YORKWAY" CAPILLARY FITTINGS

ELBOWS

Copper x Female B.S.P. Thread

No. 14 YORKSHIRE	No. W14 YORKWAY
3/8" O.D. x 1/2" F.B.S.P.	3/8" O.D. x 1/2" F.B.S.P.
1/2" O.D. x 1/2" F.B.S.P.	1/2" O.D. x 1/2" F.B.S.P.
5/8" O.D. x 1/2" F.B.S.P.	5/8" O.D. x 1/2" F.B.S.P.
3/4" O.D. x 3/4" F.B.S.P.	3/4" O.D. x 3/4" F.B.S.P.
3/4" O.D. x 1/2" F.B.S.P.	3/4" O.D. x 1/2" F.B.S.P.
1" O.D. x 1" F.B.S.P.	1" O.D. x 1" F.B.S.P.
1" O.D. x 3/4" F.B.S.P.	1" O.D. x 3/4" F.B.S.P.
1 1/4" O.D. x 1 1/4" F.B.S.P.	1 1/4" O.D. x 1 1/4" F.B.S.P.
1 1/4" O.D. x 1" F.B.S.P.	1 1/2" O.D. x 1 1/2" F.B.S.P.
1 1/2" O.D. x 1 1/2" F.B.S.P.	2" O.D. x 2" F.B.S.P.
2" O.D. x 2" F.B.S.P.	

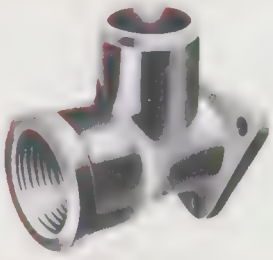


TEES

All ends for Copper

No. 24 YORKSHIRE	No. W24 YORKWAY
3/8" O.D. all ends	5/16" O.D. all ends
1/2" O.D. all ends	3/8" O.D. all ends
5/8" O.D. all ends	1/2" O.D. all ends
3/4" O.D. all ends	5/8" O.D. all ends
1" O.D. all ends	3/4" O.D. all ends
1 1/4" O.D. all ends	1" O.D. all ends
1 1/2" O.D. all ends	1 1/4" O.D. all ends
2" O.D. all ends	1 1/2" O.D. all ends
	2" O.D. all ends

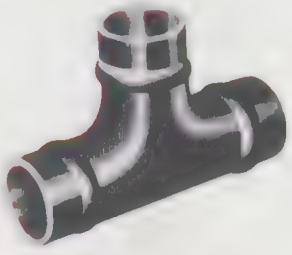
Available as Slip Fitting



ELBOWS

Copper x Female B.S.P. Thread and with Backplate

No. 15BP YORKSHIRE	No. W15BP YORKWAY
3/8" O.D. x 1/2" F.B.S.P.	1/2" O.D. x 1/2" F.B.S.P.
1/2" O.D. x 1/2" F.B.S.P.	5/8" O.D. x 1/2" F.B.S.P.
5/8" O.D. x 1/2" F.B.S.P.	3/4" O.D. x 3/4" F.B.S.P.
3/4" O.D. x 3/4" F.B.S.P.	3/4" O.D. x 1/2" F.B.S.P.
3/4" O.D. x 1/2" F.B.S.P.	



TEES

All Ends for Copper

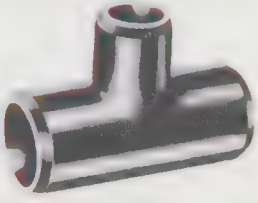
No. 24CU YORKSHIRE

1/2" O.D. all ends
5/8" O.D. all ends
3/4" O.D. all ends
1" O.D. all ends
1 1/4" O.D. all ends

ELBOWS

Copper x Extended Male B.S.P. Thread 2" long, and with Backplate

No. 19BP YORKSHIRE	No. W19BP YORKWAY
1/2" O.D. x 1/2" M.B.S.P.	1/2" O.D. x 1/2" M.B.S.P.
5/8" O.D. x 1/2" M.B.S.P.	5/8" O.D. x 1/2" M.B.S.P.
3/4" O.D. x 1/2" M.B.S.P.	3/4" O.D. x 1/2" M.B.S.P.



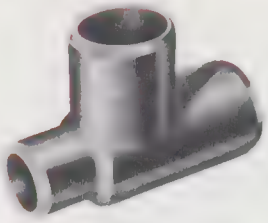
TEES

All Ends for Copper Branch Reduced

No. 25 YORKSHIRE			No. W25 YORKWAY		
O.D.	O.D.	O.D.	O.D.	O.D.	O.D.
1/2" x	1/2" x	3/8"	1/2" x	1/2" x	3/8"
5/8" x	5/8" x	1/2"	5/8" x	5/8" x	1/2"
3/4" x	3/4" x	5/8"	3/4" x	3/4" x	5/8"
3/4" x	3/4" x	1/2"	3/4" x	3/4" x	1/2"
1" x	1" x	3/4"	1" x	1" x	3/4"
1" x	1" x	5/8"	1" x	1" x	5/8"
1" x	1" x	1/2"	1" x	1" x	1/2"
1 1/4" x	1 1/4" x	1"	1 1/4" x	1 1/4" x	1"
1 1/4" x	1 1/4" x	3/4"	1 1/4" x	1 1/4" x	3/4"
1 1/2" x	1 1/2" x	1 1/4"	1 1/2" x	1 1/2" x	1 1/4"
2" x	2" x	1 1/2"	2" x	2" x	1 1/2"
2" x	2" x	1 1/4"	2" x	2" x	1 1/4"

Available as Slip Fitting

"YORKSHIRE" AND "YORKWAY" CAPILLARY FITTINGS



TEES

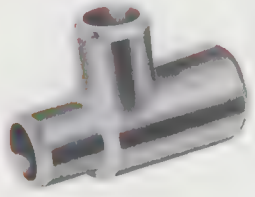
All Ends for Copper
One End Reduced

No. 26 YORKSHIRE

O.D.	O.D.	O.D.
5/8"	x 1/2"	x 5/8"
3/4"	x 5/8"	x 3/4"
3/4"	x 1/2"	x 3/4"
1"	x 3/4"	x 1"
1"	x 1/2"	x 1"
1 1/4"	x 1"	x 1 1/4"

No. W26 YORKWAY

O.D.	O.D.	O.D.
5/8"	x 1/2"	x 5/8"
3/4"	x 5/8"	x 3/4"
3/4"	x 1/2"	x 3/4"
1"	x 3/4"	x 1"



TEES

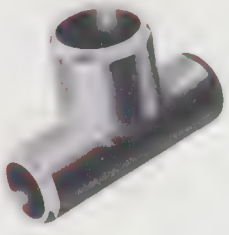
All Ends for Copper
Branch and One End
Reduced

No. 27 YORKSHIRE

O.D.	O.D.	O.D.
3/4"	x 5/8"	x 5/8"
3/4"	x 1/2"	x 1/2"
1"	x 3/4"	x 3/4"
1 1/4"	x 1"	x 1"

No. W27 YORKWAY

O.D.	O.D.	O.D.
3/4"	x 5/8"	x 5/8"
3/4"	x 1/2"	x 1/2"
1"	x 3/4"	x 3/4"
1 1/4"	x 1"	x 1"



TEES

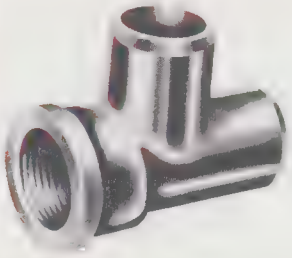
All Ends for Copper
Both Ends Reduced

No. 28 YORKSHIRE

O.D.	O.D.	O.D.
1/2"	x 1/2"	x 3/8"
3/4"	x 3/4"	x 1"
1"	x 1"	x 1 1/4"

No. W28 YORKWAY

O.D.	O.D.	O.D.
1/2"	x 1/2"	x 3/4"
3/4"	x 3/4"	x 1"



TEES

Female B.S.P. Thread
One End
x Copper x Copper

No. 29 YORKSHIRE

O.D.		O.D.
3/4"	x 3/4" F.B.S.P. x	3/4"
1/2"	x 3/4" F.B.S.P. x	3/4"
3/4"	x 1/2" F.B.S.P. x	3/4"

No. W29 YORKWAY

O.D.		O.D.
3/4"	x 3/4" F.B.S.P. x	3/4"
3/4"	x 1/2" F.B.S.P. x	3/4"

TEES

Copper x Copper
x Female B.S.P.
Thread Branch

No. 30 YORKSHIRE

O.D.	O.D.	
3/8"	x 3/8"	x 1/2" F.B.S.P.
1/2"	x 1/2"	x 1/2" F.B.S.P.
5/8"	x 5/8"	x 1/2" F.B.S.P.
3/4"	x 3/4"	x 3/4" F.B.S.P.
3/4"	x 3/4"	x 1/2" F.B.S.P.
1"	x 1"	x 3/4" F.B.S.P.
1 1/2"	x 1 1/2"	x 1 1/2" F.B.S.P.
2"	x 2"	x 1 1/2" F.B.S.P.

No. W30 YORKWAY

O.D.	O.D.	
1/2"	x 1/2"	x 1/2" F.B.S.P.
5/8"	x 5/8"	x 1/2" F.B.S.P.
3/4"	x 3/4"	x 3/4" F.B.S.P.
3/4"	x 3/4"	x 1/2" F.B.S.P.
1"	x 1"	x 3/4" F.B.S.P.
1 1/2"	x 1 1/2"	x 1 1/2" F.B.S.P.
2"	x 2"	x 1 1/2" F.B.S.P.

Available as Slip Fitting

TEES

Copper x Copper
x Female B.S.P.
Thread Branch and
with Backplate

No. 30BP YORKSHIRE

O.D.	O.D.	
1/2"	x 1/2"	x 1/2" F.B.S.P.
5/8"	x 5/8"	x 1/2" F.B.S.P.
3/4"	x 3/4"	x 3/4" F.B.S.P.
3/4"	x 3/4"	x 1/2" F.B.S.P.

No. W30BP YORKWAY

O.D.	O.D.	
1/2"	x 1/2"	x 1/2" F.B.S.P.
5/8"	x 5/8"	x 1/2" F.B.S.P.
3/4"	x 3/4"	x 3/4" F.B.S.P.
3/4"	x 3/4"	x 1/2" F.B.S.P.

"YORKSHIRE" AND "YORKWAY" CAPILLARY FITTINGS

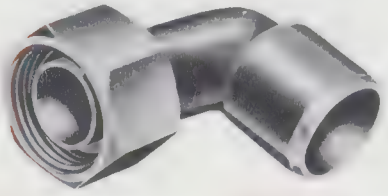
TEES

Copper x Copper x Extended Male B.S.P. Thread 2" long, and with Backplate.

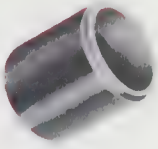
No. 32BP YORKSHIRE	No. W32BP YORKWAY
½" O.D. x ½" M.B.S.P.	½" O.D. x ½" M.B.S.P.
¾" O.D. x ½" M.B.S.P.	¾" O.D. x ½" M.B.S.P.

BENT TAP CONNECTORS

Copper x Loose Coupling Nut (Cone Joint)



No. 63 YORKSHIRE	No. W63 YORKWAY
½" O.D. x ½" Nut	½" O.D. x ½" Nut
⅝" O.D. x ½" Nut	⅝" O.D. x ½" Nut
¾" O.D. x ¾" Nut	¾" O.D. x ¾" Nut



STOPENDS

To fit on to tubes

No. 61 YORKSHIRE	No. W61 YORKWAY
⅜" O.D.	⅜" O.D.
½" O.D.	½" O.D.
⅝" O.D.	⅝" O.D.
¾" O.D.	¾" O.D.
1" O.D.	1" O.D.
1¼" O.D.	1¼" O.D.
1½" O.D.	1½" O.D.
2" O.D.	2" O.D.

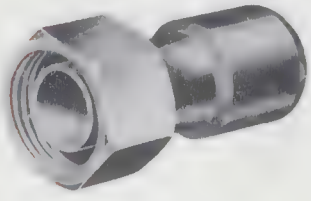
BENT UNION CONNECTORS

Copper x Loose Coupling Nut (Cone Joint to suit Nos. 70 and 72)

No. 64 YORKSHIRE	No. W64 YORKWAY
½" O.D. x ¾" Nut	½" O.D. x ¾" Nut
¾" O.D. x 1" Nut	¾" O.D. x 1" Nut
1" O.D. x 1¼" Nut	1" O.D. x 1¼" Nut
1¼" O.D. x 1½" Nut	1¼" O.D. x 1½" Nut
1½" O.D. x 2" Nut	1½" O.D. x 2" Nut

STRAIGHT TAP CONNECTORS

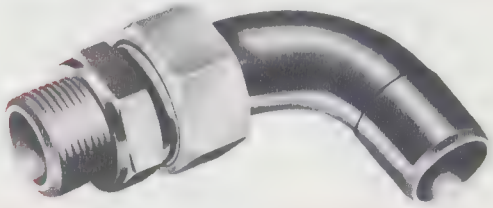
Copper x Loose Coupling Nut (Cone Joint)



No. 62 YORKSHIRE	No. W62 YORKWAY
½" O.D. x ½" Nut	½" O.D. x ½" Nut
⅝" O.D. x ½" Nut	⅝" O.D. x ½" Nut
¾" O.D. x ¾" Nut	¾" O.D. x ¾" Nut

BENT UNION CONNECTORS

Copper x Male B.S.P. Thread (No. 64 plus No. 70)



No. 65 YORKSHIRE	No. W65 YORKWAY
½" O.D. x ½" M.B.S.P.	½" O.D. x ½" M.B.S.P.
¾" O.D. x ¾" M.B.S.P.	¾" O.D. x ¾" M.B.S.P.
¾" O.D. x ½" M.B.S.P.	¾" O.D. x ½" M.B.S.P.
1" O.D. x 1" M.B.S.P.	1" O.D. x 1" M.B.S.P.
1" O.D. x ¾" M.B.S.P.	1" O.D. x ¾" M.B.S.P.
1¼" O.D. x 1¼" M.B.S.P.	1¼" O.D. x 1¼" M.B.S.P.
1½" O.D. x 1½" M.B.S.P.	1½" O.D. x 1½" M.B.S.P.

"YORKSHIRE" AND "YORKWAY" CAPILLARY FITTINGS

BENT UNION CONNECTORS

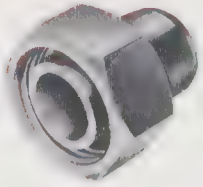
Copper x Female B.S.P. Thread (No. 64 plus No. 72)

No. 65F YORKSHIRE	No. W65F YORKWAY
$\frac{1}{2}$" O.D. x $\frac{1}{2}$" F.B.S.P.	$\frac{1}{2}$" O.D. x $\frac{1}{2}$" F.B.S.P.
$\frac{3}{4}$" O.D. x $\frac{3}{4}$" F.B.S.P.	$\frac{3}{4}$" O.D. x $\frac{3}{4}$" F.B.S.P.
$\frac{3}{4}$" O.D. x $\frac{1}{2}$" F.B.S.P.	$\frac{3}{4}$" O.D. x $\frac{1}{2}$" F.B.S.P.
1" O.D. x 1" F.B.S.P.	1" O.D. x 1" F.B.S.P.
1" O.D. x $\frac{3}{4}$" F.B.S.P.	1" O.D. x $\frac{3}{4}$" F.B.S.P.
$1\frac{1}{4}$" O.D. x $1\frac{1}{4}$" F.B.S.P.	$1\frac{1}{4}$" O.D. x $1\frac{1}{4}$" F.B.S.P.
$1\frac{1}{2}$" O.D. x $1\frac{1}{2}$" F.B.S.P.	$1\frac{1}{2}$" O.D. x $1\frac{1}{2}$" F.B.S.P.

STRAIGHT UNION CONNECTORS

Copper x Female B.S.P. Thread (No. 68 plus No. 72)

No. 69F YORKSHIRE	No. W69F YORKWAY
$\frac{3}{8}$" O.D. x $\frac{1}{2}$" F.B.S.P.	$\frac{3}{8}$" O.D. x $\frac{1}{2}$" F.B.S.P.
$\frac{3}{8}$" O.D. x $\frac{3}{8}$" F.B.S.P.	$\frac{3}{8}$" O.D. x $\frac{3}{8}$" F.B.S.P.
$\frac{1}{2}$" O.D. x $\frac{1}{2}$" F.B.S.P.	$\frac{1}{2}$" O.D. x $\frac{1}{2}$" F.B.S.P.
$\frac{5}{8}$" O.D. x $\frac{1}{2}$" F.B.S.P.	$\frac{5}{8}$" O.D. x $\frac{1}{2}$" F.B.S.P.
$\frac{3}{4}$" O.D. x $\frac{3}{4}$" F.B.S.P.	$\frac{3}{4}$" O.D. x $\frac{3}{4}$" F.B.S.P.
$\frac{3}{4}$" O.D. x $\frac{1}{2}$" F.B.S.P.	$\frac{3}{4}$" O.D. x $\frac{1}{2}$" F.B.S.P.
1" O.D. x 1" F.B.S.P.	1" O.D. x 1" F.B.S.P.
1" O.D. x $\frac{3}{4}$" F.B.S.P.	1" O.D. x $\frac{3}{4}$" F.B.S.P.
$1\frac{1}{4}$" O.D. x $1\frac{1}{4}$" F.B.S.P.	$1\frac{1}{4}$" O.D. x $1\frac{1}{4}$" F.B.S.P.
$1\frac{1}{2}$" O.D. x $1\frac{1}{2}$" F.B.S.P.	$1\frac{1}{2}$" O.D. x $1\frac{1}{2}$" F.S.B.P.
2" O.D. x 2" F.B.S.P.	2" O.D. x 2" F.B.S.P.



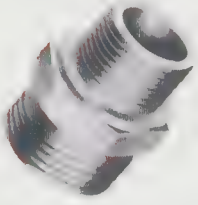
STRAIGHT UNION CONNECTORS

Copper x Loose Coupling Nut (Cone Joint to suit Nos. 70 and 72)

No. 68 YORKSHIRE	No. W68 YORKWAY
$\frac{3}{8}$" O.D. x $\frac{1}{2}$" Nut	$\frac{3}{8}$" O.D. x $\frac{1}{2}$" Nut
$\frac{1}{2}$" O.D. x $\frac{3}{4}$" Nut	$\frac{1}{2}$" O.D. x $\frac{3}{4}$" Nut
$\frac{5}{8}$" O.D. x $\frac{3}{4}$" Nut	$\frac{5}{8}$" O.D. x $\frac{3}{4}$" Nut
$\frac{3}{4}$" O.D. x 1" Nut	$\frac{3}{4}$" O.D. x 1" Nut
1" O.D. x $1\frac{1}{4}$" Nut	1" O.D. x $1\frac{1}{4}$" Nut
$1\frac{1}{4}$" O.D. x $1\frac{1}{2}$" Nut	$1\frac{1}{4}$" O.D. x $1\frac{1}{2}$" Nut
$1\frac{1}{2}$" O.D. x 2" Nut	$1\frac{1}{2}$" O.D. x 2" Nut
2" O.D. x $2\frac{1}{2}$" Nut	2" O.D. x $2\frac{1}{2}$" Nut

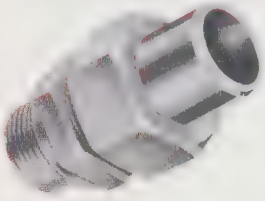
FLANGED HEXAGON NIPPLES

Large end Coned to suit No. 64's and No. 68's



No. 70

$\frac{1}{2}$" M.I. x $\frac{1}{2}$" M.B.S.P.	
$\frac{1}{2}$" M.I. x $\frac{3}{8}$" M.B.S.P.	
$\frac{3}{4}$" M.I. x $\frac{1}{2}$" M.B.S.P.	
1" M.I. x $\frac{3}{4}$" M.B.S.P.	
1" M.I. x $\frac{1}{2}$" M.B.S.P.	
$1\frac{1}{4}$" M.I. x 1" M.B.S.P.	
$1\frac{1}{4}$" M.I. x $\frac{3}{4}$" M.B.S.P.	
$1\frac{1}{2}$" M.I. x $1\frac{1}{4}$" M.B.S.P.	
2" M.I. x $1\frac{1}{2}$" M.B.S.P.	
$2\frac{1}{2}$" M.I. x 2" M.B.S.P.	



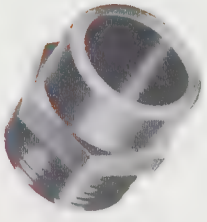
STRAIGHT UNION CONNECTORS

Copper x Male B.S.P. Thread (No. 68 plus No. 70)

No. 69 YORKSHIRE	No. W69 YORKWAY
$\frac{3}{8}$" O.D. x $\frac{1}{2}$" M.B.S.P.	$\frac{3}{8}$" O.D. x $\frac{1}{2}$" M.B.S.P.
$\frac{3}{8}$" O.D. x $\frac{3}{8}$" M.B.S.P.	$\frac{3}{8}$" O.D. x $\frac{3}{8}$" M.B.S.P.
$\frac{1}{2}$" O.D. x $\frac{1}{2}$" M.B.S.P.	$\frac{1}{2}$" O.D. x $\frac{1}{2}$" M.B.S.P.
$\frac{5}{8}$" O.D. x $\frac{1}{2}$" M.B.S.P.	$\frac{5}{8}$" O.D. x $\frac{1}{2}$" M.B.S.P.
$\frac{3}{4}$" O.D. x $\frac{3}{4}$" M.B.S.P.	$\frac{3}{4}$" O.D. x $\frac{3}{4}$" M.B.S.P.
$\frac{3}{4}$" O.D. x $\frac{1}{2}$" M.B.S.P.	$\frac{3}{4}$" O.D. x $\frac{1}{2}$" M.B.S.P.
1" O.D. x 1" M.B.S.P.	1" O.D. x 1" M.B.S.P.
1" O.D. x $\frac{3}{4}$" M.B.S.P.	1" O.D. x $\frac{3}{4}$" M.B.S.P.
$1\frac{1}{4}$" O.D. x $1\frac{1}{4}$" M.B.S.P.	$1\frac{1}{4}$" O.D. x $1\frac{1}{4}$" M.B.S.P.
$1\frac{1}{2}$" O.D. x $1\frac{1}{2}$" M.B.S.P.	$1\frac{1}{2}$" O.D. x $1\frac{1}{2}$" M.B.S.P.
2" O.D. x 2" M.B.S.P.	2" O.D. x 2" M.B.S.P.

FLANGED HEXAGON NIPPLES

Large end Coned to suit No. 64's and No. 68's



No. 72

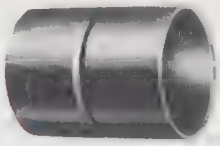
$\frac{1}{2}$" M.I. x $\frac{1}{2}$" F.B.S.P.
$\frac{1}{2}$" M.I. x $\frac{3}{8}$" F.B.S.P.
$\frac{3}{4}$" M.I. x $\frac{1}{2}$" F.B.S.P.
1" M.I. x $\frac{3}{4}$" F.B.S.P.
1" M.I. x $\frac{1}{2}$" F.B.S.P.
$1\frac{1}{4}$" M.I. x 1" F.B.S.P.
$1\frac{1}{4}$" M.I. x $\frac{3}{4}$" F.B.S.P.
$1\frac{1}{2}$" M.I. x $1\frac{1}{4}$" F.B.S.P.
2" M.I. x $1\frac{1}{2}$" F.B.S.P.
$2\frac{1}{2}$" M.I. x 2" F.B.S.P.

Heldon WROUGHT COPPER SOLDER FITTINGS

COPPER REDUCING BUSHES

No.	Dimension "A" Outside Diameter Male End	Dimension "B" Inside Diameter Female End
5277	3/8	1/4
5275	1/2	1/4
5278	1/2	3/8
5296	5/8	3/8
5213	5/8	1/2
4977	5/8	7/8
5268	5/8	1 1/8
5200	3/4	1/2
5219	3/4	5/8
4987	3/4	1 1/8
5246	7/8	1/2
5264	7/8	5/8
5249	7/8	3/4
5255	7/8	1 1/8
5267	7/8	1 3/8
4976	7/8	1 1/2
4973	1	1/4
5212	1	1/2
5273	1	5/8
5201	1	3/4
4964	1	7/8
5279	1 1/8	1/2
5272	1 1/8	5/8
5218	1 1/8	3/4
5224	1 1/8	7/8
5242	1 1/8	1
5254	1 1/8	1 1/8
4980	1 1/8	1 3/8
5284	1 1/4	1/2
5269	1 1/4	5/8
5252	1 1/4	3/4
5253	1 1/4	7/8
5202	1 1/4	1
4986	1 1/4	1 1/8
5295	1 3/4	5/8
5245	1 3/8	3/4
5228	1 3/4	7/8
5259	1 3/4	1
5217	1 3/8	1 1/8
5282	1 3/4	1 1/4
5225	1 1/2	1/2
5226	1 1/2	3/4
5271	1 1/2	7/8
5214	1 1/2	1
5258	1 1/2	1 1/8
5203	1 1/2	1 1/4
5227	1 1/2	1 3/8
5283	1 1/2	2
4989	1 9/16	1 7/8
5289	1 5/8	5/8
5204	1 5/8	1 1/8
5257	1 5/8	1 1/4
5220	1 5/8	1 3/8
5222	1 5/8	1 1/2
5223	1 5/8	1 3/4
4963	1 3/4	7/8
5290	1 3/4	1
4990	1 3/4	1 1/8
5265	1 3/4	1 3/8
4982	1 7/8	1 1/8
4970	1 7/8	1 1/2
4971	1 7/8	1 5/8
4998	1 15/16	1 1/8
5229	2	3/4
5216	2	1
5243	2	1 1/8
5231	2	1 1/4
5251	2	1 5/8
5205	2	1 1/2
5291	2	1 5/8
5287	2	1 3/4
5299	2	1 13/16
5298	2	1 7/8
4968	2	2 1/8
5206	2 1/8	1 1/8
5221	2 1/8	1 3/8
4984	2 1/8	1 1/2
5207	2 1/8	1 5/8
5276	2 1/8	1 3/4
4988	2 1/8	1 7/8
4997	2 1/8	2
4959	2 1/8	2 3/8
4966	2 1/8	2 5/8
5232	2 1/4	2
4978	2 3/8	3
5215	2 1/2	1 1/4
5233	2 1/2	1 1/2
5208	2 1/2	2
4974	2 1/2	2 1/8
4979	2 1/2	2 3/8
5263	2 1/2	2 5/8
5234	2 5/8	1 1/8
5235	2 5/8	1 3/8
5270	2 5/8	1 1/2
5209	2 5/8	1 5/8
5288	2 5/8	2
5210	2 5/8	2 1/8
4961	2 5/8	3 1/2
4995	2 7/8	1 5/8
5285	2 7/8	2 1/8
5280	3	1 5/8
5239	3	2
5248	3	2 1/8
5211	3	2 1/2
5262	3	2 5/8
4981	3	2 7/8
5266	3 1/8	1 5/8
5238	3 1/8	2 1/8
5237	3 1/8	2 5/8
5293	3 1/8	2 7/8
5274	3 1/8	3
5294	3 1/8	3 1/8
5230	3 1/4	2 1/8
4999	3 1/4	2 5/8
5240	3 1/4	3 1/8
4985	3 1/2	2 1/8
5260	3 1/2	2 5/8
5250	3 1/2	3
5241	3 1/2	3 1/8
5281	3 1/2	3 1/4
5297	3 5/8	2 1/8
5256	3 5/8	2 5/8
4975	3 5/8	3
4965	3 5/8	3 1/8
5286	3 5/8	3 1/2
4991	3 3/4	3 1/2
4969	4 1/8	2 5/8
4994	4 1/8	3 5/8
4992	4 1/8	4
4983	4 1/4	3 5/8
4993	4 1/2	2 5/8
4932	4 5/8	4 1/2
4958	4 3/4	3 1/2
4934	5	3
4931	5	3 1/2
4960	5	4

COPPER SOLDER COUPLINGS



No.	Dimension "C" Inside Diameter Female Both Ends
5103	3/16
5100	1/4
5101	5/16
5102	3/8
5104	1/2
5105	5/8
5106	3/4
5107	7/8
5108	1
5109	1 1/8
5110	1 1/4
5111	1 3/8
5112	1 1/2
5113	1 5/8
5114	1 3/4
5116	2
5117	2 1/8
5120	2 1/2
5121	2 5/8
5124	3
5126	3 1/4
5127	3 1/2
5130	4

COPPER REDUCING COUPLINGS

No.	Dimension "D" Inside One End	Dimension "E" Inside Other End
5559	3/8	1/4
5572	1/2	3/8
5513	5/8	1/2
5599	3/4	3/8
5573	3/4	1/2
5519	3/4	5/8
5595	7/8	1/2
5576	7/8	5/8
5565	7/8	3/4
5512	1	1/2
5578	1	5/8
5518	1	3/4
5574	1	7/8
5550	1 1/8	1/2
5563	1 1/8	5/8
5570	1 1/8	3/4
5524	1 1/8	7/8
5542	1 1/8	1
5528	1 1/4	1
5567	1 1/4	1 1/8
5551	1 3/8	5/8
5593	1 3/8	3/4
5552	1 3/8	7/8
5579	1 3/8	1
5517	1 3/8	1 1/8
5525	1 3/8	1 1/4
5564	1 1/2	3/8
5585	1 1/2	1
5514	1 1/2	1 1/4
5527	1 1/2	1 3/8
5586	1 5/8	1 1/8
5566	1 5/8	1 1/4
5520	1 5/8	1 3/8
5522	1 5/8	1 1/2
5577	1 3/4	1 1/8
5553	1 3/4	1 1/4
5523	1 3/4	1 3/8
5569	2	1 1/8
5580	2	1 1/2
5554	2	1 3/8
5556	2 1/8	1 3/8
5558	2 1/8	1 5/8
5568	2 1/2	1 3/8
5575	2 1/2	1 1/4
5594	2 1/2	1 3/8
5538	2 1/2	1 5/8
5609	2 1/2	2
5571	2 1/2	2 1/8
5584	2 5/8	2 1/8
5587	3	1 1/8
5544	3	2
5562	3	2 1/8
5555	3	2 1/2
5590	3	2 5/8
5557	3 1/2	1 3/8
5598	3 1/2	2 1/8
5561	3 1/2	2 5/8
5560	3 1/2	3
5597	4	2 1/2
5588	4	2 5/8
5596	4	3 1/2
5589	4 1/8	2 5/8

ALL DIMENSIONS IN INCHES

WROUGHT COPPER SOLDER FITTINGS

WROUGHT COPPER ELBOWS

To take O.D. of Copper Tube

No.	Female I.D.	Female I.D.
5000	1/4	1/4
5001	5/16	5/16
5002	3/8	3/8
5034	1/2	3/8
5004	1/2	1/2
5035	5/8	1/2
5005	5/8	5/8
5036	3/4	1/2
5037	3/4	5/8
5006	3/4	3/4
5038	7/8	3/4
5007	7/8	7/8
5039	1	3/4
5041	1	7/8
5008	1	1
5042	1 1/8	1
5009	1 1/8	1 1/8
5010	1 1/4	1 1/4
5011	1 1/8	1 3/8
5012	1 1/2	1 1/2
5013	1 5/8	1 5/8
5014	1 3/4	1 3/4
5016	2	2
5017	2 1/8	2 1/8
5020	2 1/2	2 1/2
5021	2 7/8	2 7/8
5024	3	3
5026	3 1/4	3 1/4
5027	3 1/2	3 1/2
5028	3 3/4	3 3/4
5029	4	4
5030	4 1/4	4 1/4
5043	4 1/2	4 1/2

WROUGHT COPPER ELBOWS 45°

To take O.D. of Copper Tube

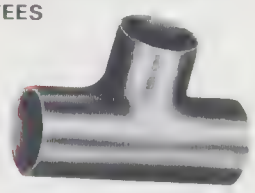
No	Female I.D. Size
5302	1/8
5304	1/2
5305	7/8
5306	1/4
5307	1/8
5308	1
5309	1 1/8
5310	1 1/4
5311	1 1/8
5312	1 1/2
5313	1 7/8
5314	1 1/4
5316	2
5317	2 1/8
5320	2 1/2
5321	2 7/8
5324	3
5326	3 1/4
5327	3 1/2

WROUGHT COPPER ELBOWS

Male to Female

No.	Outside Diameter of Elbow One End	Inside Diameter of Elbow Other End
5352	3/8	3/8
5354	1/2	1/2
5355	5/8	5/8
5356	3/4	3/4
5386	7/8	5/8
5357	7/8	7/8
5358	1	1
5359	1 1/8	1 1/8
5360	1 1/4	1 1/4
5361	1 3/8	1 3/8
5362	1 1/2	1 1/2
5363	1 5/8	1 5/8
5364	1 3/4	1 3/4
5366	2	2
5367	2 1/8	2 1/8
5370	2 1/2	2 1/2
5371	2 5/8	2 5/8
5374	3	3
5377	3 1/2	3 1/2

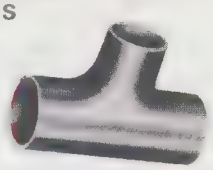
WROUGHT COPPER TEES



To take O.D. of Copper Tube

No.	Size
6003	3/16
6000	1/4
6001	5/16
6002	3/8
6004	1/2
6005	5/8
6006	3/4
6007	7/8
6008	1
6009	1 1/8
6010	1 1/4
6011	1 3/8
6012	1 1/2
6013	1 5/8
6014	1 3/4
6016	2
6017	2 1/8
6020	2 1/2
6021	2 5/8
6024	3
6025	3 1/8
6026	3 1/4
6027	3 1/2
6028	3 5/8
6029	4
6034	4 1/8

WROUGHT COPPER TEES

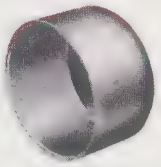


Reduced on Branch

To take O.D. of Copper Tube

No.	Line O.D.	Branch O.D.
6101	5/16	1/4
6102	3/8	1/4
6103	1/2	1/4
6104	1/2	3/8
6105	5/8	1/2
6140	3/4	3/8
6135	3/4	1/2
6106	3/4	5/8
6107	7/8	3/4
6108	1	7/8
6109	1 1/8	1
6110	1 1/4	1 1/8
6111	1 3/8	1 1/4
6112	1 1/2	1 3/8
6113	1 5/8	1 1/2
6114	1 3/4	1 5/8
6116	2	1 7/8
6117	2 1/8	2
6120	2 1/2	2 1/8
6121	2 5/8	2 1/2
6124	3	2 7/8
6127	3 1/2	3 1/8

STOP ENDS



To take O.D. of Copper Tube

No.	Size
66150	3/8
66100	1/2
66152	5/8
66102	3/4
66153	7/8
66103	1
66130	1 1/8
66104	1 1/4
66131	1 3/8
66154	1 1/2
66132	1 5/8
66155	1 3/4
66140	1 7/8
66115	2
66133	2 1/8
66119	2 3/8
66118	2 1/2
66134	2 5/8
66121	2 7/8
66122	3
66135	3 1/8
66136	3 1/4
66156	3 1/2
66157	4
66120	5
66151	6

Y-PIECE

INSIDE DIA "B"

INSIDE DIA. "A"

To take O.D. Copper Tube

No.	"A"	"B"
6501	5/8	5/8
6503	3/4	5/8
6502	7/8	5/8
6504	1	5/8
6508	1	3/4

No.	"A"	"B"
6505	1 1/8	5/8
6509	1 1/8	3/4
6500	1 1/8	7/8
6506	1 1/4	5/8
6507	1 3/8	5/8

COPPER PIPE CLIPS

No.	Tube Size
102950	1/4
102951	5/16
102952	3/8
102953	1/2
102954	5/8
102955	3/4
102956	7/8
102957	1
102958	1 1/8
102959	1 1/4

No.	Tube Size
102960	1 3/8
102965	1 1/2
102967	1 5/8
102966	1 3/4
102961	2
102968	2 1/8
102962	2 1/2
102969	2 5/8
102964	3 1/2

ALL DIMENSIONS IN INCHES

WROUGHT COPPER SOLDER FITTINGS

COPPER RETURN BENDS

Not Swaged

No	O D	Centres
5410	⅛	2¼
5423	¼	1⁹⁄₁₆
5428	¼	1½
5422	¼	1 8
5404	¼	2
5411	¼	2½
5412	¼	3⅛
5409	⅜	1 8
5401	⅜	1⅞
5400	⅜	2
5408	⅜	2³⁄₃₂
5414	⅜	2½
5413	⅜	3
5405	⅜	3½
5415	½	1 8
5416	½	2
5402	½	2¼
5419	½	2¾
5406	½	3½
5417	⅝	2¼
5403	1	2¼
5425	1⅛	2⁷⁄₁₆

COPPER RETURN BENDS

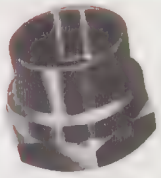
O.D. is reduced to fit a Specified Bore Size

No	O D	Centres
5440	⅜	2¼
5453	½	1⁹⁄₁₆
5458	½	1½
5452	½	1.8
5434	½	2
5441	½	2½
5442	½	3⅛
5439	⅝	1.8
5431	⅝	1⅞
5430	⅝	2
5438	⅝	2³⁄₃₂
5444	⅝	2½
5443	⅝	3
5435	⅝	3½
5445	¾	1 8
5446	¾	2
5432	¾	2¼
5449	¾	2¾
5436	¾	3½
5447	⅞	2¼
5433	1	2¼
5455	1⅛	2⁷⁄₁₆

COPPER RETURN BENDS

Swaged to take O.D. of Copper Pipe

No	O D	Centres
5470	⅛	2¼
5483	¼	1⁹⁄₁₆
5588	¼	1½
5482	¼	1 8
5464	¼	2
5471	¼	2½
5472	¼	3⅛
5469	⅜	1 8
5461	⅜	1⅞
5460	⅜	2
5468	⅜	2³⁄₃₂
5474	⅜	2½
5473	⅜	3
5465	⅜	3½
5475	½	1 8
5476	½	2
5462	½	2¼
5479	½	2¾
5466	½	3½
5477	⅝	2¼
5463	1	2¼
5485	1⅛	2⁷⁄₁₆



SCREWED B.S.P. or N.P.T.

Sweat Copper to Female Thread

No	O.D. of Copper Tube	Female B.S.P Thread
60247	¼	⅛
60248	¼	¼
60249	¼	⅜
60250	⁵⁄₁₆	¼
60251	⅜	¼
60252	⅜	⅜
60253	⅜	½
60254	½	¼
60255	½	⅜
60200	½	½
60256	½	¼
60257	⅝	¼
60258	⅝	⅜
60201	⅝	½
60259	⅝	¾
60260	⅝	1
60261	¾	¼
60262	¾	⅜
60203	¾	½
60202	¾	¾
60263	¾	1
60264	⅞	¾
60265	⅞	1
60204	1	½
60205	1	¾
60206	1	1
60266	1⅛	¼
60267	1⅛	1
60268	1⅛	1¼
60207	1¼	½

No	O.D. of Copper Tube	Female B.S.P. Thread
60208	1¼	¾
60209	1¼	1
60210	1¼	1¼
60269	1⅜	1
60270	1⅜	1¼
60211	1½	½
60212	1½	¾
60213	1½	1
60214	1½	1¼
60215	1½	1½
60271	1½	2
60272	1⅝	1
60273	1¾	1
60274	1¾	1¼
60275	1¾	1½
60217	2	1
60218	2	1¼
60219	2	1½
60220	2	2
60278	2⅛	2
60227	2½	1¼
60228	2½	1½
60229	2½	2
60230	2½	2¼
60231	2½	2½
60234	3	1½
60235	3	2
60236	3	2¼
60237	3	2½
60238	3	3

SCREWED B.S.P. or N.P.T.

Sweat Copper to Male Thread

No	O.D. of Copper Tube	Male B S P Thread
60365	¼	⅛
60300	¼	¼
60367	¼	⅜
60366	⁵⁄₁₆	¼
60301	⅜	¼
60302	⅜	⅜
60368	⅜	½
60303	½	¼
60304	½	⅜
60305	½	½
60369	½	¾
60306	⅝	¼
60307	⅝	⅜
60308	⅝	½
60370	⅝	¾
60371	⅝	1
60310	¾	¼
60311	¾	⅜
60312	¾	½
60314	¾	¾
60372	¾	1
60393	⅞	½
60373	⅞	¾
60374	⅞	1
60315	1	½
60317	1	¾
60318	1	1
60375	1⅛	¾
60376	1⅛	1
60377	1⅛	1¼
60399	1⅛	1½

No	O D of Copper Tube	Male B S P Thread
60319	1¼	¾
60321	1¼	1
60322	1¼	1¼
60323	1¼	1½
60378	1⅜	1
60379	1⅜	1¼
60324	1½	¾
60326	1½	1
60327	1½	1¼
60328	1½	1½
60329	1½	1¾
60364	1½	2
60381	1⅝	1
60330	1¾	1
60331	1¾	1¼
60332	1¾	1½
60334	2	1
60335	2	1¼
60336	2	1½
60338	2	2
60382	2⅛	2
60341	2¼	1½
60345	2½	1¼
60346	2½	1½
60348	2½	2
60350	2½	2½
60351	3	1½
60353	3	2
60354	3	2¼
60355	3	2½
60356	3	3

ALL DIMENSIONS IN INCHES

REFRIGERATION FLARE FITTINGS

FLARE NUTS–FORGED

No.	Flare
1651	1/16
1652	1/4
1653	5/16
1654	3/8
1656	1/2
1657	5/8
1658	3/4
1659	7/8

SHORT BARREL FLARE NUTS–FORGED

No	Flare
1671	1/4
1670	5/16
1672	3/8
1673	1/2
1674	5/8
1675	3/4

GROOVED FROST PROOF FLARE NUTS–FORGED

No.	Flare
1695	1/4
1696	5/16
1697	3/8
1698	1/2
1699	5/8

FROST PROOF FLARE NUTS–FORGED

No.	Flare
1701	1/16
1702	1/4
1703	5/16
1704	3/8
1706	1/2
1707	5/8
1708	3/4
1709	7/8

REDUCING FLARE NUTS –FORGED

No	Flare	Pipe
1751	5/16	1/4
1752	3/8	1/4
1753	3/8	5/16
1754	1/2	3/8
1755	1/2	1/2
1756	5/8	1/2

REDUCING FROST PROOF FLARE NUTS–FORGED

No.	Flare	Pipe
1801	5/16	1/4
1802	3/8	1/4
1803	1/2	1/2
1804	5/8	1/2
1805	3/4	3/4

STEEL FLARE NUTS ZINC PLATED

No	Flare
1821	1/4
1822	5/16
1823	3/8

FLARE SEAL CAP NUTS –EXTRUDED

No.	Flare
1850	5/16
1851	1/4
1852	5/16
1853	3/8
1855	1/2
1856	5/8
1857	1/4

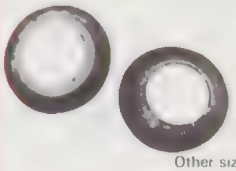
COPPER FLARE BONNETS (Pressed Copper)

No	Flare
1901	1/4
1907	5/16
1902	3/8
1903	1/2
1904	5/8
1905	1/4

COPPER FLARE WASHERS (Pressed Copper)

No	Flare
1951	1/4
1952	3/8
1953	1/2
1954	5/8
1955	1/4

COPPER WASHERS (22 Gauge)



No	I D	O D
1970	1/4	x 5/16
1971	5/16	x 3/8
1972	3/8	x 1/2
1973	7/16	x 5/8
1974	1/2	x 3/4

Other sizes available on request

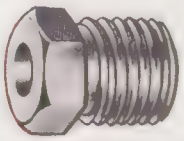
FLARE SEAL PLUGS –EXTRUDED

No.	Male Flare
2000	3/16
2001	1/4
2002	5/16
2003	3/8
2004	1/2
2005	5/8
2006	1/4

GAS PLUGS (Hexagon) –EXTRUDED

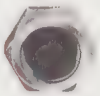
No	Male B S P
2051	1/8 (Long Taper Tinned)
2052	1/4 " "
2053	3/8 " "
2054	1/2 " "
2055	1/4 " "

FUSIBLE METAL PLUGS



No	B S.P. Thread
2064	1/8 280° F
2065	1/8 160° F
2066	1/4 160° F
2067	1/4 150° F

SEALING CAPS (Fitted with Lead Washer)



No	Female B S P Thread
2075	1/2
2076	1/4

DOUBLE FLARE ELBOWS –FORGED

No	Male Flare
2100	1/16
2101	1/4
2102	5/16
2103	3/8
2105	1/2
2106	5/8
2107	1/4
2108	7/8

REDUCING FLARE ELBOWS –FORGED

No	Male Flare	Male Flare
2151	1/4	3/8
2152	1/2	1/2
2153	3/4	1/2
2154	1/4	1/2

MALE FLARE TO FEMALE B.S.P. ELBOWS–FORGED

(Available in N.P.T. Prefix with letter 'B')

No.	Male Male Flare	Female B S P Thread
2249	1/4	1/4
2250	1/4	1/8
2251	1/8	1/4
2252	1/4	1/8
A2252	1/8	1/2
2253	1/2	1/2
A2253	1/2	1/4
2254	3/4	3/4
2255	3/4	1/2

MALE FLARE TO FEMALE FLARE ELBOWS–FORGED

No.	Male Flare	Female Flare
2301	3/8	1/4
2302	1/2	1/2

L.P. GAS FITTINGS — MALE FLARE ENDS SUPPLIED COMPLETE WITH FLARE NUTS. FITTING NO. PREFIX "LP"

ALL DIMENSIONS IN INCHES

REFRIGERATION FLARE FITTINGS

MALE FLARE TO MALE B.S.P. ELBOWS – FORGED

(Available in N.P.T. Prefix with letter 'B')

No	Male Flare	Male B S P Thread
2200	3/16	1/8
2201	1/4	1/8
2202	1/4	1/4
2203	1/4	3/8
A2203	1/4	1/2
2204	5/16	1/8
2205	5/16	1/4
A2205	5/16	3/8
2206	3/8	1/4
2207	3/8	1/4
2208	3/8	3/8
2209	3/8	1/2
A2209	1/2	1/8
2210	1/2	1/4
2211	1/2	3/8
2212	1/2	1/2
2213	5/8	1/4
2214	5/8	3/8
2215	5/8	1/2
A2215	5/8	3/4
2216	3/4	1/2
2217	3/4	3/4
2218	7/8	3/4
2222	1/8	3/4
2223	1/2	3/4

MALE B.S.P. ELBOWS – FORGED

(Available in N.P.T. Prefix with letter 'B')

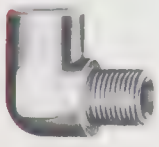
No	Male B S P Thread	Male B S P Thread
2315	1/8	1/8
2316	1/4	1/4
2317	3/8	3/8
2318	1/2	1/2
2319	3/4	3/4
2320	1	1
2323	1/4	3/8
2324	3/8	1/2
2325	1/2	3/4

FEMALE B.S.P. ELBOWS – FORGED

No	Female B S P Thread
2345	1/4
2346	3/8
2347	1/2
2348	3/4

MALE B.S.P. TO FEMALE B.S.P. – FORGED

(Available in N.P.T. Prefix with letter 'B')



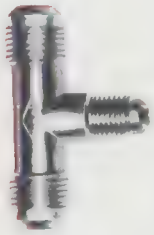
No	Male B.S.P Thread	Female B S P Threac
2329	1/8	1/4
2330	1/4	1/4
2331	3/8	3/8
2340	1/4	3/8
2332	1/2	1/2

TEES FLARED – FORGED

No	Male Flare All Over
2350	3/16
2351	1/4
2352	5/16
2353	3/8
2354	1/2
2355	5/8
2356	1/4

TEES REDUCING FLARE – FORGED

(Reduction on Branch)



No	Male Flare	Male Flare	Male Flare
2400	1/4	1/4	3/16
2401	1/4	1/4	3/8
A2401	3/8	3/8	3/16
2402	3/8	3/8	1/4
2403	3/8	3/8	1/2
2404	3/4	3/4	5/8
2405	1/2	1/2	1/4
2406	1/2	1/2	3/8
2407	1/2	1/2	5/8
2408	5/8	5/8	1/4
2409	5/8	5/8	3/8
2410	5/8	5/8	1/2
2411	5/8	5/8	1/4
2412	3/4	3/4	1/4
2413	3/4	3/4	3/8
2414	3/4	3/4	1/2
2415	1	1/4	5/8

TEES MALE FLARE TO FEMALE B.S.P. – FORGED

(B.S.P. on Branch)

No.	Male Flare	Male Flare	Female B S P Thread
2530	3/8	3/8	1/8

TEES MALE FLARE TO FEMALE FLARE – FORGED

(Female Flare on Branch)

(Available in N.P.T. Prefix with letter 'B')

No.	Male Flare	Male Flare	Female Flare
2540	1/4	1/4	1/4

TEES MALE B.S.P. – FORGED

(Available in N.P.T. Prefix with letter 'B')

No.	Male B S P Thread
2520	1/4
2521	3/8
2522	1/2
2523	3/4

TEES REDUCING FLARE – FORGED

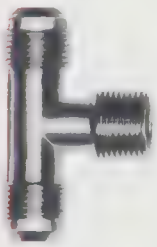
(Reduction on Run)

No.	Male Flare	Male Flare	Male Flare
2448	3/16	1/8	1/4
2450	3/16	3/8	3/8
2451	1/4	3/8	3/8
2452	1/4	1/2	1/2
2453	1/4	5/8	5/8
2454	3/8	1/4	1/4
2455	3/8	1/2	1/2
2456	1/2	1/4	1/4
2457	1/2	3/8	3/8
2458	1/2	5/8	5/8
2459	5/8	1/2	1
2460	5/8	3/4	3/4
2461	3/4	1/2	1/2
2462	3/4	5/8	5/8

TEES MALE FLARE TO MALE B.S.P. – FORGED

(B.S.P. on Branch)

(Available in N.P.T. Prefix with letter 'B')



No	Male Flare	Male Flare	Male B S P Thread
2497	3/16	3/16	1/8
2501	1/4	1/4	1
2502	1/4	1/4	*1/8
2503	1/4	1/4	1/4
2504	1/4	1/4	3/8
2505	5/16	5/16	1/8
A2505	5/16	5/16	1/4
2506	3/8	3/8	1/8
2507	3/8	3/8	1/4
2508	3/8	3/8	3/8
2509	1/2	1/2	1/4
2510	1/2	1/2	3/8
2511	1/2	1/2	1/2
2512	5/8	5/8	3/8
2513	5/8	5/8	1/2
2514	3/4	3/4	1/2
2516	3/4	3/4	3/4

* Long Taper

TEES FEMALE B.S.P. – FORGED

(Available in N.P.T. Prefix with letter 'B')

No.	Female B.S.P Thread
2535	1/4
2536	3/8
2537	1/2
2538	3/4

CROSS PIECES – FORGED

No.	Male Flare All Over
2551	1/4
2552	3/8
2553	1
2554	5/8
2555	3/4

ALL DIMENSIONS IN INCHES

L.P. GAS FITTINGS — MALE FLARE ENDS SUPPLIED COMPLETE WITH FLARE NUTS. FITTING NO. PREFIX "LP"

REFRIGERATION FLARE FITTINGS

UNIONS DOUBLE FLARE – EXTRUDED

No.	Male Flare
2600	1/8
2601	3/16
2602	1/4
2602 H D	*1/4
2603	5/16
2604	3/8
2606	1/2
2607	5/8
2608	3/4
2609	7/8

* Heavy Duty

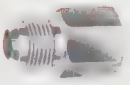
UNIONS REDUCING MALE B.S.P. – EXTRUDED

(Available in N.P.T. Prefix with letter 'B')

No.	Male B S P Thread	Male B S P Thread
2681	1/4	1/8
2682	3/8	1/4
2683	3/8	1/2
2684	3/4	1/2
2685	1/2	1/4

UNIONS MALE FLARE TO FEMALE B.S.P. – EXTRUDED

(Available in N.P.T. Prefix with letter 'B')



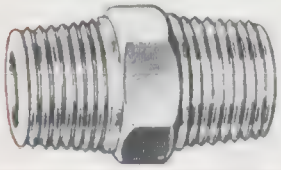
No.	Male Flare	Female B S P Thread
2797	3/16	1/8
2798	3/16	1/4
2799	3/16	3/8
2800	1/4	1/2
2801	1/4	1/8
2802	1/4	1/4
2803	1/4	3/8
2804	5/16	1/8
2805	5/16	1/4
2806	5/16	3/8
2807	3/8	1/8
2808	3/8	1/4
2809	3/8	3/8
2810	3/8	1/2
A2810	3/8	3/4
2811	1/2	1/4
2812	1/2	3/8
2813	1/2	1/2
2814	1/2	3/4
A2815	5/8	3/4
2815	5/8	1/2
2816	5/8	1/4
2817	1/4	1/4

UNIONS DOUBLE FLARE REDUCING – EXTRUDED

No.	Male Flare	Male Flare
2649	3/16	3/8
2651	1/4	5/16
2652	1/4	3/8
2653	1/4	1/2
2654	1/4	5/8
2655	5/16	3/8
2656	5/16	1/2
2657	3/8	1/2
2659	3/8	5/8
2661	1/2	5/8
2662	1/2	3/4
2663	5/8	3/4

UNIONS MALE B.S.P. – EXTRUDED

(Available in N.P.T. Prefix with letter 'B')



No.	Male B.S.P. Thread
2735	1/8
2736	1/4
2737	3/8
2738	1/2
2739	3/4

UNIONS MALE FLARE TO MALE B.S.P. – EXTRUDED

(Available in N.P.T. Prefix with letter 'B')

No.	Male Flare	Male B S.P. Thread
2698	3/16	1/8
2699	3/16	1/4
2700	3/16	3/8
2701	3/16	1/2
2702	1/4	1/8
2703	1/4	*1/8
2704	1/4	1/4
2705	1/4	*1/4
2706	1/4	3/8
2707	1/4	1/2
2708	5/16	1/8
2709	5/16	1/4
2710	3/8	1/8
2711	3/8	1/4
2712	3/8	3/8
2713	3/8	1/2
2714	3/8	3/4
A2715	1/2	1/8
2716	1/2	1/4
2717	1/2	3/8
2718	1/2	1/2
2719	1/2	3/4
2720	5/8	1/4
2721	5/8	3/8
2722	5/8	1/2
2723	5/8	3/4
2724	3/4	1/2
2725	3/4	3/4
2726	3/4	1
2727	7/8	3/4

* Long Taper

UNIONS MALE FLARE TO FEMALE FLARE – EXTRUDED

No.	Male Flare	Female Flare
2751	3/16	1/4
A2751	1/4	1/8
2752	1/4	3/16
2753	1/4	5/16
A2753	1/4	1/4
2754	1/4	3/8
2755	1/4	1/2
2756	1/4	5/8
2757	5/16	1/4
2758	5/16	3/8
2759	5/16	1/2
2760	3/8	1/4
2761	3/8	5/16
2762	3/8	1/2
2763	3/8	5/8
A2763	3/8	3/4
2764	1/2	1/4
2765	1/2	5/16
2766	1/2	3/8
2768	1/2	5/8
2769	1/2	3/4
2770	5/8	1/2
2771	5/8	3/4
2772	3/4	1/2
2773	3/4	5/8

QUICK-ACTING COUPLERS

No.	
2831	1/4 Long Type
2832	Rubbers, Long Type
2833	1/4 Short Type
2834	Rubbers, Short Type

FLARE CONNECTIONS

No.	Flare
2850	1/4 x 1/8 Forged
2851	1/4 Forged
2852	5/16 Forged
2853	3/8 Extruded
2855	1/2 Extruded
2856	5/8 Extruded

SWIVEL CONNECTORS (FORGED NUTS)

No.	Flare
2861	1/4
2862	3/8
2863	1/2
2864	5/8
2865	1/4

REFRIGERANT CYLINDER ADAPTOR – EXTRUDED (Fitted with Lead Washer)

No.	Male Flare	Female B.S.P. Thread
2820	1/4	3/8
2821	1/4	1/2
2822	1/4	3/4

GAS BUSHINGS – HEXAGON – EXTRUDED

(Available in N.P.T. Prefix with letter 'B')

No.	Male B.S.P. Thread	Female B.S.P. Thread
2875	1/4	1/8
2876	3/8	1/4
2877	1/2	3/8
2878	3/4	1/2
2879	1/2	1/4
2880	1/2	1/8
2881	3/8	1/8
28ye	a	1/4

L.P. GAS FITTINGS — MALE FLARE ENDS SUPPLIED COMPLETE WITH FLARE NUTS. FITTING NO. PREFIX "LP"

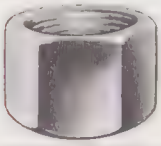
ALL DIMENSIONS IN INCHES

TURNER PRECISION BRASS FITTINGS

No. 1 COMPRESSION SLEEVE

O D of Tube
1/8
5/32
3/16
7/32
6 m m
1/4
5/16
3/8
7/16
1/2
5/8
3/4
1

No. 2 COMPRESSION NUT



O D of Tube		
1/8	5/16	x 24 T.P.I
5/32	3/8	x 24 T.P.I
3/16	1/8	x B.S.P
1/4	7/16	x 24 T.P.I
5/16	1/2	x 24 T.P.I
3/8	9/16	x 24 T.P.I
7/16	5/8	x 24 T.P.I
1/2	11/16	x 20 T.P.I
5/8	13/16	x 18 T.P.I
3/4	1	x 18 T.P.I
1	1 309	x 11 T.P.I

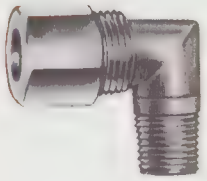
No. 3 COMPRESSION SINGLE ENDED UNION

O D of Tube		BSP Thread
1/8	x	1/8
5/32	x	1/8
3/16	x	1/8
1/4	x	1/8
1/4	x	1/4
1/4	x	3/8
1/4	x	1/2
5/16	x	1/8
5/16	x	1/4
5/16	x	3/8
5/16	x	1/2
3/8	x	1/8
3/8	x	1/4
3/8	x	3/8
3/8	x	1/2
1/2	x	1/8
1/2	x	1/4
1/2	x	3/8
1/2	x	1/2
5/8	x	1/4
5/8	x	3/8
5/8	x	1/2
3/4	x	1/4
3/4	x	3/8
3/4	x	1/2
1/4	x	1
1	x	1/4
1	x	1

No. 4 COMPRESSION DOUBLE ENDED UNION

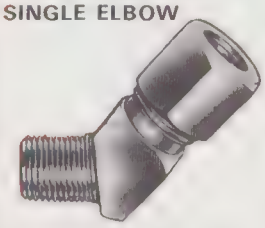
O D of Tube		
1/8	x	1/8
5/16	x	5/16
5/16	x	1/4
1/4	x	1/4
1/4	x	5/16
1/4	x	3/8
5/16	x	5/16
5/16	x	3/8
3/8	x	3/8
3/8	x	1/2
1/2	x	1/2
1/2	x	1/4
5/8	x	1/2
1/4	x	1/4
1	x	1

No. 5 COMPRESSION SINGLE ELBOW



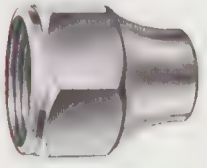
O D of Tube		BSP Thread
1/8	x	1/8
5/32	x	1/8
3/16	x	1/8
1/4	x	1/8
1/4	x	1/4
1/4	x	3/8
1/4	x	1/2
5/16	x	1/8
5/16	x	1/4
5/16	x	3/8
5/16	x	1/2
3/8	x	1/8
3/8	x	1/4
3/8	x	3/8
3/8	x	1/2
1/2	x	1/4
1/2	x	3/8
1/2	x	1/2
1/2	x	3/4
5/8	x	1/2
5/8	x	3/4
3/4	x	1/2
3/4	x	3/4
1	x	3/4
1	x	1

No. 5 x 45° COMPRESSION SINGLE ELBOW



O D of Tube		BSP Thread
1/8	x	1/8
5/32	x	1/8
3/16	x	1/8
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
5/16	x	1/4
3/8	x	1/8
3/8	x	1/4
3/8	x	3/8
1/2	x	3/8
1/2	x	1/2
5/8	x	1/2
5/8	x	3/4
3/4	x	1/2

No. 6 S.A.E. FLARE NUT

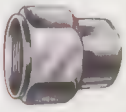


O D of Tube	
1/8	
5/32	
3/16	
1/4	
1/4	Drilled 3/16
1/4	Long
5/16	
5/16	Long
5/16	Drilled 1/4
7/16	
3/8	
3/8	Drilled 1/4
3/8	Drilled 5/16
3/8	Long
1/2	
1/2	Drilled 3/8
5/8	
5/8	Drilled 1/2
3/4	
3/4	Drilled 5/8
7/8	
1	

No. 6 THREAD IN FLARE NUT

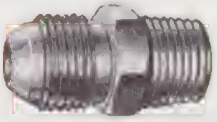
O D of Tube	Threads per Inch	O D of Tube	Threads per Inch
1/8	5/16 x 24	7/16	11/16 x 16
5/32	3/8 x 24	1/2	1/4 x 16
1/4	7/16 x 20	5/8	3/8 x 14
7/16	1/2 x 20	1/4	1 1/16 x 14
3/8	5/8 x 18	1/8	1 1/4 x 12
		1	1 5/16 x 12

No. 6 STEEL 2 PIECE J.I.C. FLARE NUT



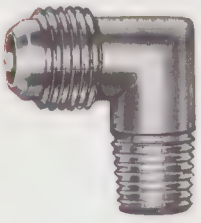
O.D. of Tube	Threads per Inch
5/16	3/8 x 24
1/4	7/16 x 20
5/16	1/2 x 20
1/8	5/8 x 18

No. 7 S.A.E. FLARE SINGLE UNION



O D of Tube		BSP Thread
1/8	x	1/8
5/32	x	1/8
3/16	x	1/4
1/4	x	1/8
5/16	x	1/2
1/4	x	1/8
1/4	x	1/4
1/4	x	1/8
1/4	x	1/2
5/16	x	1/8
5/16	x	1/4
5/16	x	1/8
3/8	x	1/8
3/8	x	1/4
3/8	x	1/2
1/2	x	1/4
1/2	x	3/8
1/2	x	1/2
5/8	x	1/4
5/8	x	3/8
5/8	x	1/2
3/4	x	1/4
3/4	x	3/8
3/4	x	1/2
1/4	x	1"
1	x	1

No. 8 S.A.E. FLARE ELBOW



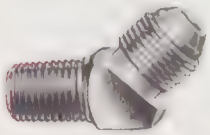
O D of Tube		BSP Thread
1/8	x	1/8
5/32	x	1/4
1/4	x	1/8
1/4	x	1/4
1/4	x	3/8
1/4	x	1/2
5/16	x	1/8
5/16	x	1/4
3/16	x	1/8
5/16	x	1/2
3/8	x	1/8
3/8	x	1/4
3/8	x	3/8
3/8	x	1/2
1/2	x	1/4
1/2	x	3/8
1/2	x	1/2
7/8	x	1/4
7/8	x	3/8
7/8	x	1/2
7/8	x	3/4
1/4	x	1/2
1/4	x	3/4

ALL DIMENSIONS IN INCHES

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

TURNER PRECISION BRASS FITTINGS

No. 8 x 45°
S.A.E. FLARE SINGLE ELBOW

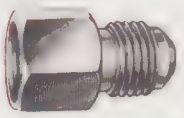


O.D. of Tube		B.S.P. Thread
1/8	x	1/8
5/32	x	1/8
3/16	x	1/8
1/4	x	1/4
5/16	x	1/8
5/16	x	1/4
3/8	x	1/4
3/8	x	1/4
1/2	x	1/8
1/2	x	1/4
1/2	x	1/2
5/8	x	1/2
3/4	x	1/2

No. 12F
COMPRESSION TWO-WAY TEE FEMALE B.S.P.

O.D. of Tube		B.S.P. Thread
3/16	x	1/8
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
5/16	x	1/4
3/8	x	1/4
1/2	x	1/8
5/8	x	1/2
3/4	x	1/2
1	x	1/4

No. 16
S.A.E. FLARE FEMALE UNION

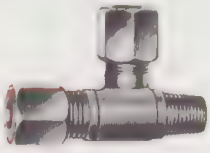


O.D. of Tube		B.S.P. Thread
1/8	x	1/8
3/16	x	1/8
3/16	x	1/4
1/4	x	3/8
3/16	x	1/2
1/4	x	1/8
1/4	x	1/4
1/4	x	3/8
1/4	x	1/2
5/16	x	1/4
5/16	x	1/8
5/16	x	3/8
5/16	x	1/2
3/8	x	1/8
3/8	x	1/4
3/8	x	3/8
3/8	x	1/2
1/2	x	1/4
1/2	x	3/8
1/2	x	1/2
1/2	x	3/4
5/8	x	3/8
5/8	x	1/2
7/8	x	3/4
1/4	x	1/2
1/4	x	1/4

COMPRESSION CHECK VALVE
No. 9

O.D. of Tube		B.S.P. Thread
1/8	x	1/8
1/4	x	1/8
5/16	x	1/8
1/2	x	1/4

No. 13
COMPRESSION VERTICAL TWO-WAY TEE

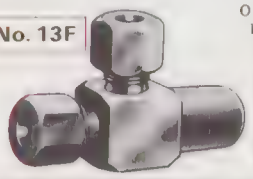


O.D. of Tube		B.S.P. Thread
1/8	x	1/8
5/32	x	1/8
1/4	x	1/8
1/4	x	1/8M x 1/8F
1/4	x	1/8M x 1/4F
5/16	x	1/8
1/2	x	1/4
1/2	x	1/4
5/8	x	1/8
5/8	x	1/2
3/4	x	1/2

No. 10
COMPRESSION FEMALE UNION

O.D. of Tube		B.S.P. Thread
1/8	x	1/8
5/32	x	1/8
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
5/16	x	1/4
3/8	x	1/8
3/8	x	1/4
1/2	x	1/8
1/2	x	1/2
5/8	x	1/2
3/4	x	1/8
3/4	x	1/2
7/8	x	3/4
1	x	1/4
1	x	1

COMPRESSION VERTICAL TWO-WAY TEE FEMALE B.S.P.
No. 13F



O.D. of Tube		B.S.P. Thread
1/4	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4
1/2	x	1/8
1/2	x	1/4
5/8	x	1/2
1	x	1/2

No. 17
S.A.E. FLARE DOUBLE UNION

O.D. of Tube		O.D. of Tube
1/8	x	1/8
5/32	x	5/32
3/16	x	1/4
1/4	=	1/4
1/4	=	5/16
1/4	=	3/8
1/4	x	1/2
1/4	x	5/8
5/16	x	5/16
5/16	x	3/8
5/16	x	1/2
3/8	x	3/8
3/8	x	1/2
3/8	=	5/8
1/2	=	1/2
1/2	x	1/2
1/2	x	1/4
5/8	x	5/8
5/8	x	1/4
1/4	x	1/4
1	x	1

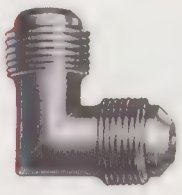
COMPRESSION DOUBLE ELBOW
No. 11

O.D. of Tube		B.S.P. Thread
1/8	x	1/8
5/32	x	1/16
1/4	x	1/4
5/16	x	1/16
5/16	x	1/8
1/2	x	1/2
5/8	x	5/8
1/4	x	1/4
1	x	1

No. 14
COMPRESSION THREE-WAY TEE

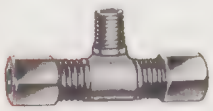
O.D. of Tube all over
1/8
5/32
1/4
5/16
3/8
1/8 x 1/8 x 1/4
1/2
5/8
1/4
1

No. 18
S.A.E. FLARE DOUBLE ELBOW



O.D. of Tube		O.D. of Tube
1/8	x	1/8
3/16	x	1/16
1/4	x	1/4
1/4	x	1/8
5/16	x	5/16
3/8	x	3/8
3/8	x	1/2
1/2	x	1/2
5/8	x	1/2
5/8	x	5/8
1/4	x	1/4

No. 12
COMPRESSION TWO-WAY TEE



O.D. of Tube		B.S.P. Thread
1/8	x	1/8
5/32	x	1/8
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
5/16	x	1/4
3/8	x	1/8
3/8	x	1/4
1/2	x	1/8
1/2	x	1/4
1/2	x	1/8
5/8	x	1/2
3/4	x	1/2
1	x	1/4

No. 15
COMPRESSION FEMALE ELBOW

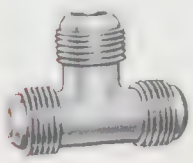
O.D. of Tube		B.S.P. Thread
1/8	x	1/8
3/16	x	1/8
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
5/16	x	1/4
3/8	x	1/4
1/2	x	1/4
1/2	x	3/8
1/2	x	1/2
5/8	x	1/2
5/8	x	3/8
3/4	x	1/2
3/4	x	3/4
1	x	1/4
1	x	1

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

ALL DIMENSIONS IN INCHES

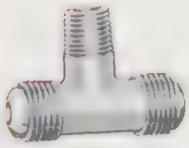
TURNER PRECISION BRASS FITTINGS

No. 19 S.A.E. FLARE THREE-WAY TEE



O D of Tube all over				
⅛				
3/16				
¼				
¼	×	¼	×	3/16
3/16	×	3/16	×	⅛
¼	×	⅛	×	¼
¼	×	¼	×	3/16
5/16	×	¼	×	5/16
⅜	×	⅛	×	¼
⅜	×	¼	×	⅜
⅜	×	½	×	¼
½	×	¼	×	⅜
½	×	½	×	½
¾				
1				

No. 20 S.A.E. FLARE TWO-WAY TEE



O D of Tube		B S P Thread
⅛	×	⅛
3/16	×	⅛
¼	×	⅛
¼	×	¼
¼	×	⅜
5/16	×	⅛
5/16	×	¼
⅜	×	⅛
⅜	×	¼
⅜	×	⅜
⅜	×	½
½		
½		
½		
½		
½		
¾		
¾		
1	×	1

DOLE PATTERN NUT

No. 21

O D of Tube	Threads per Inch	
⅛	5/16	x 24
3/16	⅜	x 24
¼		x 24
¼		x 20
5/16		x 20
⅜		x 16

DOLE PATTERN BODY

No. 22

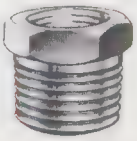
O D of Tube		B S P Thread
5/16	×	⅛
⅜	×	⅛
⅜	×	¼
½	×	¼
⅝	×	¼
¾	×	¼

DOLE PATTERN ELBOW

No. 23

O D of Tube		B S P Thread
⅛	×	⅛
3/16	×	⅛
¼	×	⅛
¼	×	¼
5/16	×	⅛
⅜	×	¼

No. 24 REDUCING BUSH

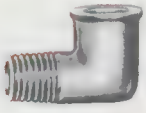


Male B S P Thread		Female B S P Thread
¼	×	⅛
⅜	×	⅛
⅜	×	¼
½	×	⅛
½	×	¼
½	×	⅜
⅝	×	¼
½	×	⅛
½	×	¼
¾	×	¼
¾	×	⅜
¾	×	½
1	×	¾

No. 25 M. & F. ELBOW EXTRUDED

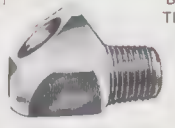
Male B S P. Thread		Female B S P Thread
⅛	×	⅛
¼	×	¼
⅜	×	⅜
½	×	½

No. 25 M. & F. ELBOW CAST



Male B.S.P. Thread		Female B.S.P. Thread
⅛	×	⅛
¼	×	¼
⅜	×	⅜
½	×	½
¾	×	¾
1	×	1

No. 25 x 45° M. & F. ELBOW

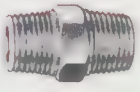


Male B.S.P. Thread		Female B.S.P. Thread
⅛	×	⅛
⅛	×	¼
¼	×	¼
⅜	×	⅛
⅜	×	¼

No. 26 HEX. SOCKET

Female B S P Thread	
⅛	
¼	
⅜	
½	
¾	
1	

No. 27 HEX. NIPPLE



B S P Thread	
⅛	
¼	
⅜	
½	
¾	
1	

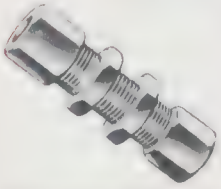
No. 28 LONG HEX. NIPPLE

B.S.P. Thread	Length
⅛	1
⅛	2
¼	1½
¼	2

No. 29 HEX. REDUCING SOCKET

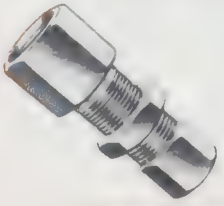
Female B S P Thread		Female B S P Thread
¼	×	⅛
⅜	×	⅛
⅜	×	¼
½	×	⅛
½	×	¼
½	×	⅜
¾	×	¼
¾	×	⅜
¾	×	½
1	×	¾

No. 31 COMPRESSION BULK HEAD UNION



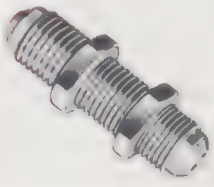
O D of Tube		O D of Tube
⅛	×	⅛
3/16	×	3/16
¼	×	¼
¼	×	5/16
5/16	×	⅜
⅜	×	⅜
½	×	½
⅝	×	⅝
¾	×	¾
1	×	1

No. 31F COMPRESSION TUBE TO FEMALE B.S.P. BULK HEAD UNION



O D of Tube		Female B S P Thread
⅛	×	⅛
3/16	×	¼
¼	×	¼
¼	×	⅜
5/16	×	⅜
⅜	×	⅜
½	×	½
⅝	×	½
¾	×	¾

No. 32 S.A.E. FLARE BULK HEAD UNION



O D of Tube		O D of Tube
⅛	×	⅛
3/16	×	3/16
¼	×	¼
¼	×	5/16
5/16	×	⅜
⅜	×	⅜
½	×	½
⅝	×	⅝
¾	×	¾

DRILLING SIZE FOR No. 31, 31F & 32 BULK HEAD UNIONS

Tube Size	Bulkhead Hole Size No. 31, 31F	No. 32
⅛		
3/16		
¼		
5/16		
⅜		
½		
⅝		
¾		
1	1	1 1/16
1¼	1 5/16	1 5/16

No. 33 B.S.P. CAPS

B S P Thread
⅛
¼
⅜
½
¾
1

ALL DIMENSIONS IN INCHES

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

TURNER PRECISION BRASS FITTINGS

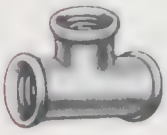
No. 34 FEMALE ELBOW

B.S.P Thread
⅛
¼
⅜
½
¾
1

No. 34 x 45° FEMALE ELBOW

B S P Thread
⅛
¼
⅜

No. 35 FEMALE TEE



B.S.P. Thread
¼
⅜
½
1

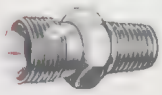
No. 36 S.A.E. FLARE FEMALE ELBOW

O D of Tube		B S P Thread
⅛	x	⅛
3/16	x	
¼	x	⅛
	x	⅜
	x	¼
	x	
⅜	x	⅜
	x	⅜
½	x	½
¾	x	½

No. 37 B.S.P. FEMALE CROSS

B S P Thread
¼
⅜
½
¾
1

No. 38 SOLDER-ON SINGLE UNION BODY (46)

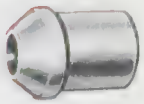


O D of Tube		B S P Thread
⅛	x	⅛
3/16	x	⅛
¼	x	⅛
	x	¼
	x	¼
5/16	x	⅜
	x	⅜ F
	x	¼
	x	⅜
	x	⅜
⅜	x	⅜
	x	½
	x	½
½	x	⅝
	x	½
	x	½
¾	x	½
	x	¾
	x	¾

No. 39 SOLDER-ON DOUBLE UNION BODY (47)

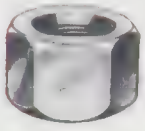
O D of Tube		O D of Tube
⅛	x	⅛
3/16	x	
¼	x	¼
5/16	x	
⅜	x	⅜
½	x	½
⅝	x	⅝
	x	

No. 44 SOLDER-ON TAIL



O D of Tube	
3/16	Drilled ⅛
¼	Drilled 3/16
5/16	Drilled ¼
⅜	x ⅛ B.S.P
½	
1	

No. 45 SOLDER-ON NUT



O.D of Tube
3/16
½
⅝
1

No. 45 THREAD IN SOLDER-ON NUT

O D of Tube	Threads
⅛	5/16 x 26
3/16	⅛ B.S.P
¼	7/16 x 20
5/16	¼ B.S.P
⅜	⅜ B.S.P.
½	½ B.S.P.
⅝	⅝ B.S.P.
¾	¾ B.S.P
1	1 B.S.P.
VILLIERS TYPE ¼	7/16 x 19

No. 46 SOLDER-ON SINGLE UNION

O D of Tube		B S P Thread
⅛	x	
3/16	x	
¼	x	⅛
	x	¼
	x	¼
5/16	x	⅜
	x	⅜
⅜	x	¼
	x	⅜
	x	⅜
½	x	½
	x	¾
	x	½
⅝	x	½
¾	x	½
	x	¾

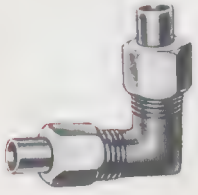
No. 47 SOLDER-ON DOUBLE UNION

O.D of Tube		O.D of Tube
⅛	x	⅛
3/16	x	
¼	x	¼
5/16	x	
⅜	x	⅜
½	x	½
⅝	x	⅝
¾	x	

No. 48 MALE TO MALE ELBOW

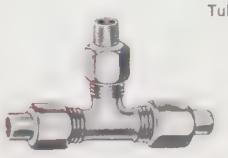
B S P Thread		B S P Thread
⅛	x	⅛
	x	¼
	x	¼
	x	
	x	⅜
	x	
	x	½
	x	
¾	x	¼

No. 49 SOLDER-ON DOUBLE ELBOW



O D of Tube		O D of Tube
	x	
	x	
	x	
	x	
	x	
	x	
	x	
	x	
	x	

No. 50 SOLDER-ON THREE-WAY TEE



O.D of Tube all over
⅛
¼

No. 50B SOLDER-ON THREE-WAY TEE BODY

O D of Tube all over
⅛
¼
½

No. 56 S.A.E. FLARE SEAL NUTS

O.D. of Tube
¼
5/16
⅜
½
¾

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

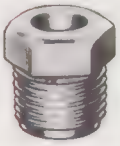
ALL DIMENSIONS IN INCHES

TURNER PRECISION BRASS FITTINGS

No. 57 S.A.E. MALE FLARE TO S.A.E. FEMALE FLARE CONNECTOR

Flare Tube Male	Female
3/16	1/4
1/4	5/16
5/16	3/8
3/8	1/2
1/2	5/8

No. 58 INVERTED FLARE NUT

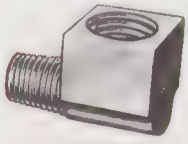


O.D. of Tube	Threads per Inch
1/8	5/16 x 28
3/16	1/8 x 24
1/4	7/16 x 24
5/16	1/2 x 20
3/8	5/8 x 18
1/2	1/4 x 18

No. 58S INVERTED FLARE STEEL NUT (CAD. PLATED)

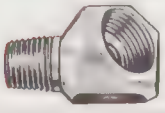
O.D. of Tube
3/16
1/4
5/16
3/8
1/2

No. 59 INVERTED FLARE ELBOW



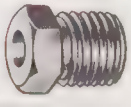
O.D. of Tube		B.S.P. Thread
1/8	x	1/8
3/16	x	1/8
1/4	x	1/8
1/4	x	1/4
3/16	x	1/4
5/16	x	1/4
3/8	x	1/8
3/8	x	1/4
1/2	x	1/8
1/2	x	1/4

No. 59 x 45° INVERTED FLARE ELBOW



O.D. of Tube		B.S.P. Thread
1/4	x	1/8
5/16	x	1/4

No. 60 FORD CARBURETTOR NUT



O.D. of Tube
1/8
5/16

No. 61 BREATHER CAPS

B.S.P. Thread
1/8
1/4
3/8
1/2
3/4

No. 62 INVERTED FLARE SINGLE UNION BODY

Also available 3/16 x 1/8 S.A.E.

O.D. of Tube		B.S.P. Thread
1/8	x	1/8
3/16	x	1/8
1/16	x	1/4
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
3/8	x	1/4
1/2	x	1/8
1/2	x	1/2
5/8	x	1/2
3/16	x	1/8
3/16	x	1/16
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
5/16	x	1/2

No. 63 INVERTED FLARE DOUBLE UNION

O.D. of Tube		O.D. of Tube
1/8	x	1/8
3/16	x	3/16
1/4	x	1/4
5/16	x	5/16
3/8	x	1/8
1/2	x	1/2

No. 64 B.S.P. TAPER PLUG

B.S.P. Thread
1/8
1/4
3/8
1/2
3/4
1/2 S.A.E. (Holden Sump)
1

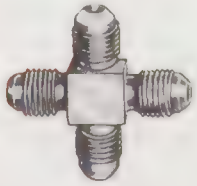
No. 64P WASHER PLUG PARALLEL

B.S.P. Thread	A.F. Size
1/8	7/16
1/4	9/16
3/8	11/16
1/2	1"
3/4	1 5/16

No. 65 S.A.E. FLARE PLUG

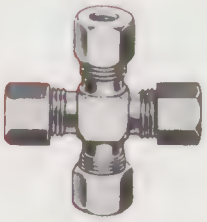
O.D. of Tube
3/16
1/4
5/16
3/8
1/2
5/8
3/4

No. 67 S.A.E. FLARE CROSS



O.D. of Tube all over
1/8
3/16
1/4
5/16
3/8
1/2
5/8
3/4

No. 68 COMPRESSION CROSS



O.D. of Tube all over
1/8
3/16
1/4
5/16
3/8
1/2
5/8
3/4
1

Other Combinations on application

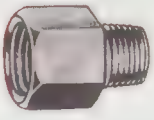
No. 70 S.A.E. FLARE SWIVEL CONNECTOR

O.D. of Tube
1/4
5/16
3/8
1/2
5/8
3/4

No. 71 TANK COLLAR

Female B.S.P. Thread	Boss Dia.
1/8	1/2
1/4	5/8
3/8	3/4
1/4	3/4
3/8	7/8
1/2	1"
3/4	1 1/8

No. 72 ADAPTOR



Female B.S.P. Thread		Male B.S.P. Thread
1/8	x	1/8
1/4	x	1/8
1/4	x	1/4
3/8	x	1/8
3/8	x	1/4
1/2	x	1/4 x 1"
3/8	x	3/8
1/2	x	1/2
1/2	x	3/4
3/4	x	1/2
1/4	x	1/2

No. 73 REDUCING NIPPLE

B.S.P. Thread		B.S.P. Thread
1/4	x	1/8
3/8	x	1/8
3/8	x	1/4
1/2	x	1/4
1/2	x	3/8
3/4	x	3/8
1/4	x	1/2

No. 74 LOCK NUT

B.S.P. Thread
1/8
1/4
3/8
1/2
3/4

ALL DIMENSIONS IN INCHES

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

TURNER PRECISION BRASS FITTINGS

No. 75 MALE B.S.P. "Y" PIECE

B.S.P Thread
1/8
1/4
3/8

No. 75 FEMALE B.S.P. "Y" PIECE

B.S.P Thread
1/8
1/4
3/8

No. P3 NIPPLE HOSE OR TUBE LONG BARB SERIES

I.D. Hose		B.S.P. Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/8
1/2	x	1/4
1	x	1/4

No. P3 (81) NIPPLE PLASTIC TUBE SHORT SERIES

I.D Hose		B.S.P Thread
1/16	x	1/8
1/4	x	1/8
5/16	x	1/8
1/2	x	1/4

No. P4 TAILS FOR COMPRESSION FITTINGS

SHORT SERIES

No. 2 Nut Size		Hose I.D
1/16	x	3/16
1/4	x	1/4
5/16	x	5/16
1/8	x	1/8

No. P4 TAILS FOR COMPRESSION FITTINGS

LONG BARB SERIES

No 2 Nut Size		I.D Tube
3/16	x	1/16
1/4	x	1/4
5/16	x	5/16
3/8	x	1/8

No. P5 TAIL LONG BARB SERIES

No. 45 Nut Size		Hose I.D
3/16	x	3/16
1/8	x	1/8
1/4	x	1/4
7/16	x	7/16
5/16	x	1/4
5/16	x	5/16
1/8	x	1/8
1/8	x	1/8
1/8	x	1/8
1/2	x	1/2
1/2	x	1/2
1/2	x	3/8
3/8	x	3/8
3/8	x	1/2
1/4	x	1/4
1	x	1

No. P5 (80) TAIL SHORT SERIES

No 45 Nut Size		I.D Tube
3/16	x	3/16
1/4	x	1/4
5/16	x	1/4
5/16	x	5/16
1/8	x	1/8

No. P6 ELBOW LONG BARB SERIES

Hose I.D		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/8
1/8	x	1/4

No. P6 (83) ELBOW SHORT SERIES

I.D Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
1/8	x	1/4

No. P7 CONNECTOR LONG BARB SERIES

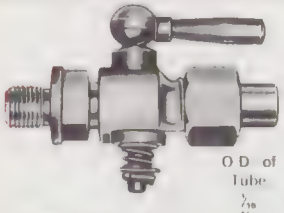
Hose I.D	
1/16	
1/4	
5/16	
3/8	
1/2	
1/4	

No. P7 (82) CONNECTOR SHORT SERIES

I.D Tube	
3/16	
1/4	
5/16	
3/8	

TURNER PETROL TAP AND COCK SECTION

SINGLE ENDED PETROL TAP



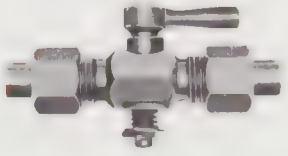
T3 SOLDER-ON LEVER TAP

T6 SOLDER-ON LEVER TAP

CT3 COMPRESSION LEVER TAP

O.D. of Tube		B.S.P Thread
1/16	x	1/8
1/4	x	1/8
1/4	x	1/4
5/16	x	1/4
3/16	x	1/4
1/8 B.S.P.	x	1/8
1/8	x	1/4
1/8	x	1/8
1/2	x	3/8
1/2	x	1/2
1/16	x	1/8
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
7/16	x	1/4
1/8	x	1/4

DOUBLE ENDED PETROL TAP

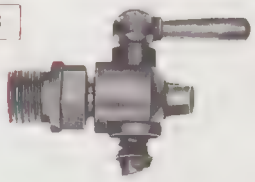


SOLDER-ON LEVER TAP

	O.D. of Tube		O.D. of Tube
T7	3/16	x	3/16
T8	1/4	x	1/8
T9	5/16	x	5/16
T10	1/8	x	1/4
	1/2	x	1/2

STRAIGHT DRAIN COCK

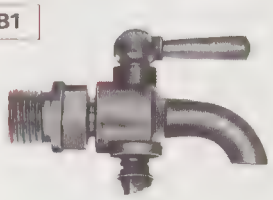
DT3



B.S.P Thread
1/8
1/4
3/8

BENT DRAIN COCK

DB1



B.S.P Thread
1/8
1/4

ALL DIMENSIONS IN INCHES

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

TURNER PETROL TAP AND COCK SECTION

No. JT3 PLASTIC TUBE LEVER TAP

Tube I.D.		B.S.P. Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/8
3/8	x	1/4

No. 30 DRAINCOCK

B.S.P Thread	
1/8	
1/4	
3/8	
1/8	Special
1/4	Special

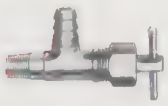
No. 40 FLARE NEEDLE VALVE TAP

O.D. of Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4

No. 41 COMPRESSION NEEDLE VALVE TAP

O.D. of Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4

No. P40 (P2) PLASTIC NEEDLE VALVE TAP



Tube I.D.		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/8
1/2	x	1/4

No. 42 FLARE OFFSET NEEDLE VALVE TAP

O.D. of Tube		B.S.P. Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4

No. P42 OFFSET NEEDLE VALVE TAP

Tube I.D.		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/8

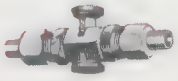
No. 43 COMPRESSION OFFSET NEEDLE VALVE TAP

O.D. of Tube		B.S.P. Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4

No. 51 SOLDER-ON PUSH PULL S.E. TAP

O.D. of Tube		B.S.P. Thread
1/4	x	1/8
1/4	x	1/4
5/16	x	1/8
5/16	x	1/4

No. 52 SOLDER-ON PUSH PULL D.E. TAP



O.D. of Tube		O.D. of Tube
1/4	x	1/4
5/16	x	5/16
1/8 B.S.P	x	1/8 B.S.P
1/4 B.S.P.	x	1/4 B.S.P.

No. 53 SOLDER-ON 3 WAY TAP

O.D. of Tube all over
1/4
5/16
3/8

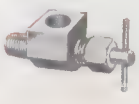
No. 54 FLARE 3 WAY TAP

O.D. of Tube all over
1/4
5/16
3/8

No. 55 SOLDER-ON 3 WAY TAP

O.D. of Tube		B.S.P. Thread
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4

No. 81 INVERTED FLARE N.V. TAP



O.D. of Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/4
5/16	x	1/8
1/8 B.S.P	x	1/8
1/4 B.S.P	x	1/4 H.D

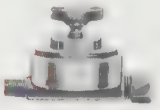
No. 84 (Pat. Pend.) COMPRESSION DIAPHRAGM LINE COCK

O.D. of Tube		O.D. of Tube
3/16	x	1/4
1/4	x	1/4
5/16	x	5/16
3/8	x	3/8

No. 85 (Pat. Pend.) FLARE DIAPHRAGM LINE COCK

O.D. of Tube		O.D. of Tube
3/16	x	3/16
1/4	x	1/4
5/16	x	5/16
3/8	x	3/8

No. 86 (Pat. Pend.) COMPRESSION SINGLE END DIAPHRAGM COCK



O.D. of Tube		B.S.P Thread
1/16	x	1/8
1/4	x	1/8
1/4	x	1/4
1/4	x	3/8

No. 87 (Pat. Pend.) FLARE SINGLE END DIAPHRAGM COCK

O.D. of Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/4
5/16	x	1/8
3/8	x	1/4

No. 88 (Pat. Pend.) COMPRESSION ANGLE DIAPHRAGM COCK

O.D. of Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4

No. 89 (Pat. Pend.) FLARE ANGLE DIAPHRAGM COCK

O.D. of Tube		B.S.P Thread
1/4	x	1/4
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4

ALL DIMENSIONS IN INCHES

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

TURNER PETROL TAP AND COCK SECTION

No. 90 COMPRESSION DOUBLE ANGLE DIAPHRAGM COCK

(Pat. Pend.)

O.D. of Tube	O.D. of Tube	B.S.P Thread
3/16	1/4	1/8
1/4	1/4	1/4
5/16	5/16	1/8
3/8	3/8	1/4

No. 91 FLARE DOUBLE ANGLE DIAPHRAGM COCK

(Pat. Pend.)

O.D. of Tube	O.D. of Tube	B.S.P Thread
3/16	3/16	1/8
1/4	1/4	1/8
5/16	5/16	1/8
3/8	3/8	1/4

No. 92 AIR CONDITIONING 3 WAY COCK WITH BLEED VANE (Panel Mounting)

(Pat. Pend.)

O.D. of Tube all over
1/4

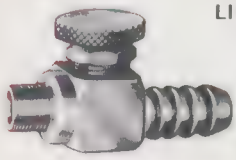
No. 93 (V.N.V.) SOLDER-ON N.V. ANGLE COCK

O.D. of Tube		B.S.P Thread
1/4	x	1/8
3/16	x	1/8

No. 94 (V.N.V.) PLASTIC TYPE N.V. ANGLE COCK

Tube I.D.		B.S.P Thread
5/16	x	1/8

No. 95 (N.V.P. 1) PLASTIC N.V. LINE COCK



Tube I.D		B.S.P Thread
5/16	x	1/8

No. 96 (N.V.T. 3) COMPRESSION N.V. LINE COCK

O.D. of Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
3/8	x	1/4

No. 97 (N.V.T. 3) SOLDER-ON N.V. LINE COCK

O.D. of Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/8
1/2	x	1/4

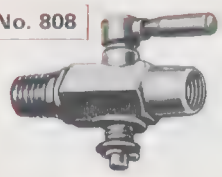
No. 98 RUBBER AND PLASTIC TUBE GAS COCKS

Tube I.D		B.S.P Thread
1/2	x	1/4
1	x	1/4
1/2	x	1/4 F
1	x	1/8
1/2	x	1

No. 404 M. & F. LEVER TAP

B.S.P Thread		B.S.P Thread
1/4	x	1/4

No. 808 M. & F. LEVER TAP

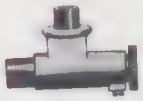


B.S.P Thread		B.S.P Thread
1/8	x	1/8

No. G75 DRUM COCK

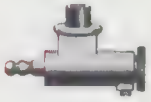
1/4 B.S.P. Thread

No. 468A (KL10C) PULL ON TAP (VILLIERS TYPE)



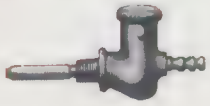
O.D. of Tube		B.S.P Thread
1/4	x	1/8

No. 468B (KL20C)



Plastic Tube I.D		B.S.P Thread
5/16	x	1/8

No. 600A



Plastic Tube I.D		B.S.P Thread
1/4	x	1/8

TURNER TAP STRAINERS

BRASS WIRE GAUZE
1/4 N.F. 80 Mesh
1/4 N.F. 100 Mesh
or Plastic 1/4 N.F.

Tap and Cock replacement parts Cork or "O" Ring Plungers. Diaphragms, Plungers, Plugs and Fibre Washers available from Stock

TURNER BRASS FITTING ASSORTMENTS —H.D. METAL BOX

Contains

TURNER No. 20	13 Taps, 7 Fittings
TURNER No. 40	40 Fittings
TURNER No. 70	70 Fittings, suit Plastic Tube
TURNER No. 90	90 Fittings
TURNER No. 132	132 Fittings
TURNER No. 134	134 Fittings
TURNER No. 178	178 Fittings
TURNER No. 360	360 Fittings
TURNER No. 682	682 Fittings in Metal CABINET

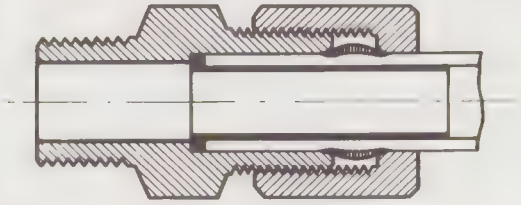
ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

ALL DIMENSIONS IN INCHES

TURNER NYLON TUBE FITTINGS AND TAPS — BRASS

To suit Nylon Flexible Tubing
⅛ to ¾ O.D., 1000 P.S.I. or 2500 P.S.I.
also
Polyethelene Flexible Tubing
⅛ to ¾ O.D., Medium Pressure

When ordering please specify
- Fitting Number and Size
- Pressure Rating *or* Wall Thickness *or* Inside Diameter of Tube



OLIVE BINDING ON BROAD AREA TO AVOID CUTTING AND CHAFFING

SPIGGOT TO PREVENT TUBE COLLAPSE AND RESTRICTION OF FLOW

No. 100 COMPRESSION SLEEVE NYLON TUBE

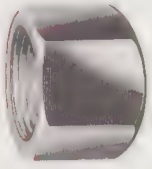
O.D. of Tube
⅛
3/16
¼
5/16
⅜
7/16
½
5/8
¾

No. 1N COMPRESSION SLEEVE ALL NYLON

To suit
Turner Compression Style Fittings
Turner Nylon Tube Fittings
Turner Turnots Internal Type Compression Fittings
Turner Turnlok Swage Type Compression Fittings

Sizes ⅛ 3/16 ¼ 5/16 ⅜ ½ 5/8 ¾ O.D. of Tube

No. 200 COMPRESSION NUT NYLON TUBE

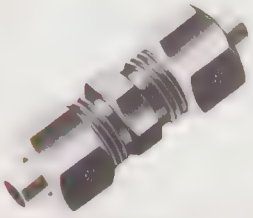


O.D. of Tube		B.S.P. Thread
⅛	5/16	x 24 T.P.I.
3/16	⅜	x 24 T.P.I.
¼	7/16	x 24 T.P.I.
5/16	½	x 24 T.P.I.
⅜	9/16	x 24 T.P.I.
7/16	⅝	x 24 T.P.I.
½	11/16	x 20 T.P.I.
5/8	13/16	x 18 T.P.I.
¾	1	x 18 T.P.I.

No. 300 PATENT NYLON SINGLE UNION

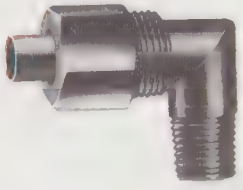
O.D. of Tube		B.S.P. Thread
⅛	x	⅛
3/16	x	⅛
¼	x	⅛
¼	x	¼
⅜	x	⅛
⅜	x	¼
⅜	x	⅜
¼	x	½
5/16	x	⅛
5/16	x	¼
5/16	x	⅜
5/16	x	½
½	x	⅛
½	x	¼
½	x	⅜
½	x	½
½	x	¾
⅝	x	¼
⅝	x	⅜
⅝	x	½
¾	x	½
¾	x	¾

No. 400 PATENT NYLON DOUBLE UNION



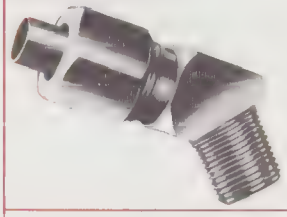
O.D. of Tube		O.D. of Tube
⅛	x	⅛
3/16	x	3/16
3/16	x	¼
¼	x	¼
¼	x	5/16
5/16	x	5/16
5/16	x	⅜
⅜	x	⅜
⅜	x	½
½	x	½
½	x	¼
⅝	x	⅝
¼	x	¼

No. 500 PATENT NYLON SINGLE ELBOW



O.D. of Tube		B.S.P Thread
⅛	x	⅛
3/16	x	⅛
¼	x	⅛
¼	x	¼
5/16	x	⅛
5/16	x	¼
⅜	x	⅛
⅜	x	¼
⅜	x	⅜
½	x	¼
½	x	⅜
½	x	½
5/8	x	⅜
5/8	x	½
¾	x	½
¾	x	¾

No. 500 x 45° PATENT NYLON SINGLE ELBOW



O.D. of Tube		B.S.P Thread
⅛	x	⅛
3/16	x	⅛
¼	x	⅛
¼	x	¼
5/16	x	⅛
5/16	x	¼
⅜	x	⅛
⅜	x	¼
⅜	x	⅜
½	x	⅜
½	x	½
5/8	x	½
¾	x	½

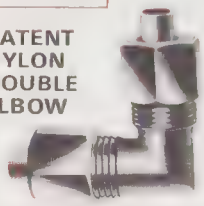
No. 900 PATENT NYLON CHECK VALVE

O.D. of Tube		B.S.P Thread
3/16	x	⅛
¼	x	⅛
5/16	x	⅛
⅜	x	¼

No. 1000 PATENT NYLON FEMALE UNION

O.D. of Tube		B.S.P Thread
⅛	x	⅛
3/16	x	⅛
¼	x	⅛
¼	x	¼
5/16	x	⅛
5/16	x	¼
⅜	x	⅛
⅜	x	¼
⅜	x	⅜
½	x	¼
½	x	⅜
½	x	½
⅝	x	½
¾	x	½
¾	x	¾

No. 1100 PATENT NYLON DOUBLE ELBOW

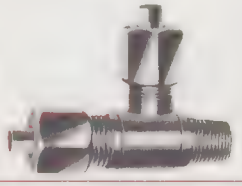


O.D. of Tube		O.D. of Tube
⅛	x	⅛
3/16	x	⅛
¼	x	¼
5/16	x	5/16
⅜	x	⅜
½	x	½
⅝	x	⅝
¾	x	¾

No. 1200 PATENT NYLON TWO-WAY TEE

O.D. of Tube		B.S.P Thread
⅛	x	⅛
3/16	x	⅛
¼	x	⅛
¼	x	¼
5/16	x	⅛
5/16	x	¼
⅜	x	⅛
⅜	x	¼
⅜	x	⅜
½	x	¼
½	x	⅜
½	x	½
⅝	x	⅜
⅝	x	½
¾	x	½

No. 1300 PATENT NYLON VERTICAL TWO-WAY TEE



O.D. of Tube		B.S.P Thread
⅛	x	⅛
3/16	x	⅛
¼	x	⅛
5/16	x	¼
⅜	x	⅛
⅜	x	¼
½	x	⅛
½	x	¼
¾	x	½

ALL DIMENSIONS IN INCHES

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

TURNER NYLON TUBE FITTINGS AND TAPS — BRASS

No. 1400
PATENT NYLON THREE-WAY TEE

O D. of Tube all over

⅛
3/16
¼
5/16
⅜
⅜ x ⅛ x ¼
½
⅝
¼

No. 1500
PATENT NYLON FEMALE ELBOW

O.D. of Tube		B S P Thread
⅛	x	⅛
3/16	x	¼
¼	x	⅜
¼	x	½
5/16	x	⅜
⅜	x	½
½	x	¼
½	x	⅜
⅝	x	½
⅝	x	¾
¼	x	½

No. 3100
PATENT NYLON BULK HEAD UNION

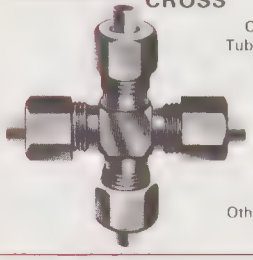
O.D. of Tube		O.D. of Tube
⅛	x	¼
¼	x	5/16
¼	x	⅜
5/16	x	⅜
½	x	⅝
½	x	¾
¼	x	½

No. 6800
PATENT NYLON CROSS

O D. of Tube all over

⅛
3/16
¼
5/16
⅜
½
⅝
¼

Other combinations on application



No. T600
PATENT NYLON LEVER TAP SINGLE END

O D of Tube		B S P Thread
⅛	x	¼
¼	x	⅜
¼	x	⅜
½	x	¾

No. 4100
PATENT NYLON NEEDLE VALVE TAP

O D of Tube		B S P Thread
3/16	x	⅛
¼	x	¼
5/16	x	⅜
⅜	x	½

No. 4300
PATENT NYLON OFFSET NEEDLE VALVE TAP

O D of Tube		B S P Thread
3/16	x	⅛
¼	x	¼
5/16	x	⅜
⅜	x	½

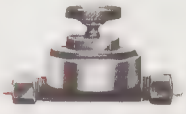
No. 5300
PATENT NYLON THREE-WAY TAP

O.D. of Tube all over

¼
5/16
⅜

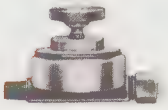
No. 8400 (Pat. Pend.)
NYLON TUBE DIAPHRAGM LINE COCK

O. D. of Tube		O D of Tube
5/16	x	⅜
½	x	¼
5/16	x	7/16
½	x	½



No. 8600 (Pat. Pend.)
NYLON TUBE SINGLE END DIAPHRAGM COCK

O D of Tube		B S P Thread
5/16	x	⅜
¼	x	½
5/16	x	⅝
½	x	¼

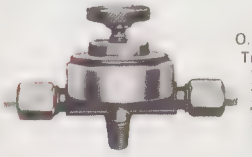


No. 8800 (Pat. Pend.)
NYLON TUBE ANGLE DIAPHRAGM COCK

O D of Tube		B S P Thread
5/16	x	⅜
¼	x	½
5/16	x	½
½	x	¾

No. 9000 (Pat. Pend.)
NYLON TUBE DOUBLE ANGLE DIAPHRAGM COCK

O.D of Tube	O.D. of Tube	B.S.P Thread
3/16	3/16	⅜
¼	¼	½
5/16	5/16	½
½	½	¾



No. 9200 (Pat. Pend.)
AIR CONDITIONING THREE-WAY COCK WITH BLEED VANE (Panel Mounting) NYLON TUBE

O.D of Tube all over

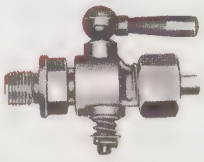
¼
5/16

No. 9600
N.V.T.3 PATENT NYLON N.V. LINE COCK

O D of Tube		B S P Thread
3/16	x	⅛
¼	x	⅛
5/16	x	⅜
⅜	x	¼

No. CT300
PATENT NYLON LEVER TAP SINGLE END

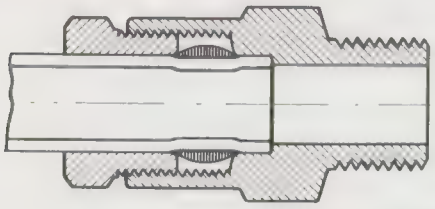
O D of Tube		B S P Thread
3/16	x	⅛
¼	x	⅛
¼	x	¼
5/16	x	⅜
5/16	x	¼
⅜	x	¼



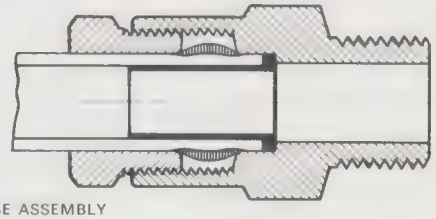
ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

ALL DIMENSIONS IN INCHES

TURNER TURNOTS INTERNAL COMPRESSION FITTING — BRASS



When ordering please specify
Body only *or* Assembled *or*
Nylon Type and Pressure



METAL TUBE ASSEMBLY

PLASTIC TUBE ASSEMBLY

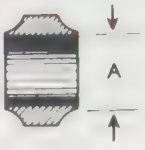
No. Z1

SLEEVE

O.D. of Tube	
1/8	(Z1)
5/32	(Z13)
3/16	(Z2)
1/4	(Z3)
5/16	(Z4)
3/8	(Z5)
1/2	(Z7)
5/8	(Z8)
3/4	(Z9)

No. Z100

SLEEVE



O.D. of Tube	
1/8	(Z401)
1/4	(Z402)
1/4	(Z403)
5/16	(Z404)
3/8	(Z405)
1/2	(Z407)

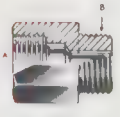
No. Z2

COMPRESSION NUT

O.D. of Tube	
1/8	(Z15)
5/32	(Z29)
3/16	(Z24)
1/4	(Z17)
5/16	(Z18)
3/8	(Z19)
1/2	(Z21)
5/8	(Z22)
1/4	(Z23)

No. Z3

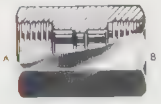
SINGLE UNION



O.D. of Tube		B.S.P. Thread	
1/8	x	1/8	(Z122A)
1/8	x	1/4	(Z223)
5/32	x	1/8	(Z222)
3/16	x	1/8	(Z120)
3/16	x	1/4	(Z125)
1/4	x	1/8	(Z129)
1/4	x	1/4	(Z127)
1/4	x	1/8	
5/16	x	1/8	(Z159)
5/16	x	1/4	(Z164)
5/16	x	1/8	(Z160)
1/8	x	1/8	
1/8	x	1/4	(Z158)
1/8	x	1/8	(Z161)
1/8	x	1/2	
1/2	x	1/8	(Z162)
1/2	x	1/4	
1/2	x	1/2	(Z163)
5/8	x	1/2	(Z168)
5/8	x	1/4	(Z212)
1/4	x	1/4	(Z217)
1/4	x	1	(Z219)

No. Z4

DOUBLE UNION



O.D. of Tube	
1/8	(Z30)
5/32	(Z247)
3/16	(Z39)
1/4	(Z32)
5/16	(Z33)
3/8	(Z34)
1/2	(Z36)
5/8	(Z37)
3/4	(Z38)

No. Y5

SINGLE ELBOW

O.D. of Tube		B.S.P. Thread	
1/8	x	1/8	(Y322)
1/8	x	1/4	(Y320)
5/32	x	1/8	(Y732)
3/16	x	1/8	(Y55)
3/16	x	1/4	(Y57)
1/4	x	1/8	(Y104)
1/4	x	1/4	(Y115)
1/4	x	3/8	
1/4	x	1/2	
5/16	x	1/8	(Y118)
5/16	x	1/4	(Y105)
5/16	x	3/8	(Y116)
3/8	x	1/8	
3/8	x	1/4	(Y107)
3/8	x	3/8	(Y106)
3/8	x	1/2	
1/2	x	3/8	(Y109)
1/2	x	1/2	(Y108)
5/8	x	1/2	(Y113)
5/8	x	3/4	(Y114)
3/4	x	3/4	(Y117)
1/4	x	1	(Y730)

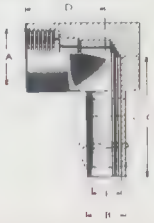
No. Z10

FEMALE UNION

O.D. of Tube		B.S.P. Thread	
1/8	x	1/8	(Z205)
1/8	x	1/4	(Z204)
5/32	x	1/8	(Z311)
3/16	x	1/8	(Z186)
3/16	x	1/4	(Z187)
1/4	x	1/8	(Z195)
1/4	x	1/4	(Z188)
5/16	x	1/8	(Z179)
5/16	x	1/4	(Z181)
5/16	x	3/8	(Z180)
3/8	x	1/4	(Z185)
3/8	x	3/8	(Z184)
1/2	x	3/8	(Z183)
1/2	x	1/2	(Z190)
5/8	x	1/2	(Z178)
5/8	x	1/4	(Z192)
3/4	x	3/4	(Z194)
3/4	x	1	(Z313)

No. Y5A

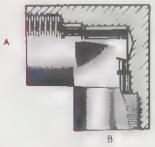
UNIVERSAL ELBOW



O.D. of Tube	
3/16	(Y958)
1/4	(Y959)
5/16	(Y960)
3/8	(Y961)
1/2	(Y962)

No. Y11

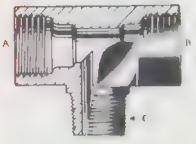
DOUBLE ELBOW



O.D. of Tube	
1/8	(Y833)
5/32	(Y834)
3/16	(Y835)
1/4	(Y208)
5/16	(Y581)
3/8	(Y209)
1/2	(Y201)
1/2 x 3/8	
3/8	(Y207)
1/4	(Y206)

No. Y12

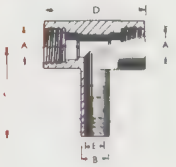
TWO-WAY TEE



O.D. of Tube		B.S.P. Thread	
1/8	x	1/8	(Y873)
5/32	x	1/8	(Y874)
3/16	x	1/8	(Y69)
1/4	x	1/8	(Y333)
5/16	x	1/4	(Y73)
1/8	x	1/4	(Y77)
1/2	x	1/8	(Y334)
5/8	x	1/2	(Y330)
1/4	x	1/4	(Y328)

No. Y12A

UNIVERSAL TEE



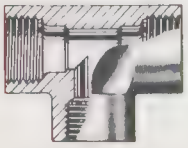
O.D. of Tube	
3/16	(Y964)
1/4	(Y965)
5/16	(Y966)
3/8	(Y967)
1/2	(Y968)

ALL DIMENSIONS IN INCHES

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

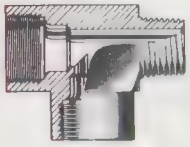
TURNER TURNOTS INTERNAL COMPRESSION FITTINGS — BRASS

No. Y12F
FEMALE TWO-WAY TEE



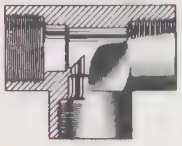
O D of Tube		BSP Thread	
1/8	x	1/8	(Y876)
5/32	x	1/8	(Y877)
3/16	x	1/8	(Y878)
1/4	x	1/8	(Y426)
5/16	x	1/4	(Y135)
3/8	x	1/4	(Y131)
1/2	x	1/8	(Y132)
5/8	x	1/2	(Y421)
1/4	x	1/4	(Y882)

No. Y13
VERTICAL TEE



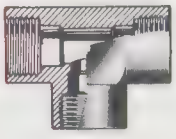
O D of Tube		BSP Thread	
1/8	x	1/8	(Y901)
5/32	x	1/8	
3/16	x	1/8	(Y60)
1/4	x	1/8	(Y476)
5/16	x	1/4	(Y63)
3/8	x	1/4	(Y479)
1/2	x	1/8	(Y273)
5/8	x	1/2	(Y62)
1/4	x	1/4	(Y478)

No. Y13F
FEMALE VERTICAL TEE



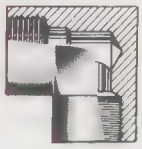
O D of Tube		BSP Thread	
1/8	x	1/8	(Y899)
5/32	x	1/8	(Y900)
3/16	x	1/8	(Y866)
1/4	x	1/8	(Y868)
5/16	x	1/4	(Y516)
3/8	x	1/4	(Y515)
1/2	x	1/8	(Y510)
5/8	x	1/2	(Y136)
1/4	x	1/4	(Y870)

No. Y14
THREE-WAY TEE



O D of Tube	
1/8	(Y629)
5/32	(Y846)
3/16	(Y30)
1/4	(Y32)
5/16	(Y35)
3/8	(Y36)
1/8 x 1/4	
1/2	(Y38)
1/2 x 3/8	
5/8	(Y37)
1/4	(Y34)

No. Y15
FEMALE ELBOW

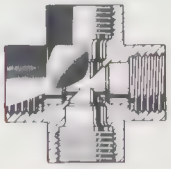


O D of Tube		BSP Thread	
1/8	x	1/8	(Y506)
1/8	x	1/4	(Y840)
5/32	x	1/8	(Y841)
3/16	x	1/8	(Y191)
3/16	x	1/4	(Y818)
1/4	x	1/8	(Y507)
1/4	x	1/4	(Y195)
5/16	x	1/8	(Y194)
5/16	x	1/4	(Y192)
5/16	x	3/8	(Y509)
3/8	x	1/4	(Y504)
3/8	x	3/8	(Y193)
1/2	x	3/8	(Y190)
1/2	x	1/2	(Y718)
5/8	x	1/2	(Y505)
5/8	x	3/4	(Y501)
3/4	x	3/4	(Y502)

No. Z65
TUBE PLUG

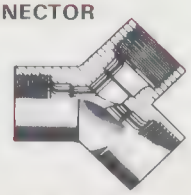
O.D. of Tube	
1/8	(Z90)
5/32	(Z309)
3/16	(Z98)
1/4	(Z92)
5/16	(Z93)
3/8	(Z94)
1/2	(Z96)
5/8	(Z97)
1/4	(Z171)

No. Y68
FOUR-WAY CROSS



O D of Tube	
1/8	(Y438)
5/32	(Y439)
3/16	(Y50)
1/4	(Y53)
5/16	(Y52)
3/8	(Y54)
1/2	(Y433)
5/8	(Y437)
1/4	(Y434)

No. Y75
Y CONNECTOR

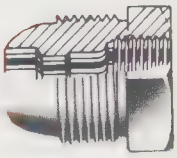


O D of Tube	
1/8	(Y895)
5/32	(Y373)
3/16	(Y98)
1/4	(Y819)
5/16	(Y97)
3/8	(Y371)
1/2	(Y372)
5/8	(Y863)
1/4	(Y896)

No. Z31
BULK HEAD UNION

Drilling Size	O.D. of Tube	
11/32	1/8	(Z321)
11/32	5/32	(Z300)
11/32	3/16	(Z84)
11/16	1/4	(Z244)
11/16	5/16	(Z86)
27/32	3/8	(Z85)
1 1/16	1/2	(Z241)
1 1/32	5/8	(Z242)
1 11/32	1/4	(Z243)

No. Z72A
REDUCING TUBE CONNECTOR



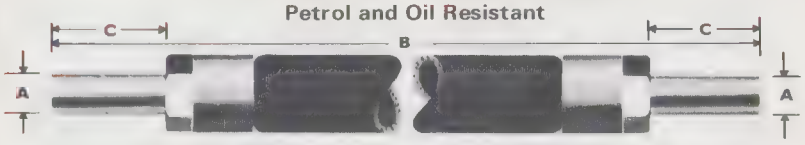
O D of Tube		BSP Thread	
5/32	x	1/8	(Z325 1)
3/16	x	1/8	(Z325 2)
3/16	x	5/32	(Z325-3)
1/4	x	1/8	(Z325-4)
1/4	x	5/32	(Z325-5)
1/4	x	1/16	(Z325-6)
5/16	x	1/8	(Z325 7)
5/16	x	1/32	(Z325 8)
5/16	x	3/16	(Z325-9)
5/16	x	1/4	(Z325-10)
3/8	x	1/8	(Z325 11)
3/8	x	5/32	(Z325 12)
3/8	x	1/16	(Z325-13)
3/8	x	1/4	(Z325 14)
3/8	x	5/16	(Z325-15)
1/2	x	1/8	(Z325-16)
1/2	x	5/32	(Z325 17)
1/2	x	3/16	(Z325-18)
1/2	x	1/4	(Z325 19)
1/2	x	5/16	(Z325 20)
1/2	x	3/8	(Z325-21)
5/8	x	1/8	(Z325-22)
5/8	x	5/32	(Z325-23)
5/8	x	3/16	(Z325-24)
5/8	x	1/4	(Z325-25)
5/8	x	5/16	(Z325-26)
5/8	x	3/8	(Z325-27)
5/8	x	1/2	(Z325-28)
1/4	x	1/8	(Z325-29)
1/4	x	1/32	(Z325-30)
1/4	x	1/16	(Z325-31)
1/4	x	1/4	(Z325-32)
1/4	x	1/16	(Z325 33)
1/4	x	1/8	(Z325-34)
1/4	x	1/2	(Z325 35)
1/4	x	5/8	(Z325-36)

SINGLE TUBE CLIPS

O D. of Tube	
5/32	(X84)
3/16	(X1)
1/4	(X13)
5/16	(X10)
3/8	(X12)
1/2	(X8)
5/8	(X9)
3/4	(X14)
7/8	(X15)

TURNER TURNOTS TUBE ASSEMBLIES

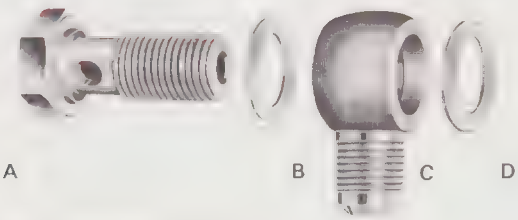
Petrol and Oil Resistant



TURNER TURNOTS NUMBER	A in	B	C in	MINIMUM RADII BEND in	MAXIMUM WORKING PRESSURE
U1	3/16	As specified	1	2½	500 P.S.I.
U30	1/4		1 1/8	4	500 P.S.I.
U45	5/16		1 1/4	4	500 P.S.I.
U130	3/8		1 1/8	4½	400 P.S.I.
U140	1/2		1½	6	250 P.S.I.

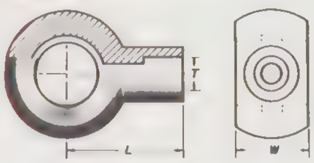
When ordering specify Turner Turnots *Part Number* followed by Length required "B"

TURNER BANJO REPLACEMENTS



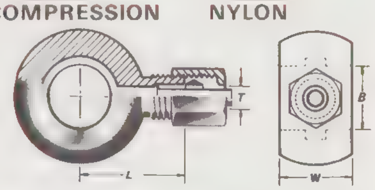
(A) Banjo Bolt—Screwed B.S.P., N.P.T., S.A.E.
(B) Copper or Fibre Washer
(C) Banjo
(D) Copper or Fibre Washer
Banjos up to 7/16 Bolt Size, recessed in body; 1/2 Bolt Size and over, recessed in bolt

TBR-A SOLDER-ON TYPE



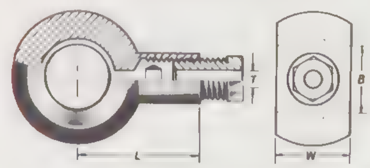
O D of Tube	Bolt	Width	Length
3/16	5/16	11/32	1/2
3/16	3/8	15/32	5/8
3/16	7/16	15/32	5/8
3/16	1/2	600	5/8
1/4	3/8	15/32	5/8
[illegible]	7/16	15/32	5/8
1/4	1/2	600	5/8
1/4	9/16	600	3/4
5/16	3/8	15/32	5/8
5/16	7/16	15/32	5/8
5/16	1/2	600	11/16
5/16	9/16	600	7/8
5/16	5/8	5/8	15/16
3/8	1/2	600	7/8
3/8	9/16	600	15/16
3/8	5/8	5/8	1
3/8	11/16	3/4	1 1/8
3/8	3/4	3/4	1 1/4
1/2	5/8	5/8	1
1/2	11/16	3/4	1 1/8
1/2	3/4	3/4	1 1/4

TBR-D COMPRESSION / TBR-N NYLON



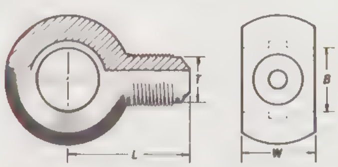
O D of Tube	Bolt	Width	Length
3/16	3/8	15/32	5/8
3/16	7/16	15/32	5/8
3/16	1/2	600	11/16
3/16	9/16	600	3/4
1/4	7/16	15/32	11/16
1/4	1/2	600	3/4
1/4	9/16	600	13/16
1/4	5/8	5/8	7/8
5/16	1/2	.600	13/16
5/16	9/16	.600	7/8
5/16	5/8	5/8	15/16
5/16	11/16	3/4	1
5/16	3/4	3/4	1 1/16
3/8	9/16	600	15/16
3/8	5/8	5/8	1
3/8	11/16	3/4	1 1/16
3/8	3/4	3/4	1 1/8

ZTBR-D INTERNAL COMPRESSION TYPE



O D of Tube	Bolt	Width	Length
3/16	3/8	15/32	5/8
3/16	7/16	15/32	5/8
3/16	1/2	600	11/16
3/16	9/16	600	3/4
1/4	7/16	15/32	11/16
1/4	1/2	600	3/4
1/4	9/16	600	11/16
1/4	5/8	5/8	7/8
5/16	1/2	600	11/16
5/16	9/16	600	7/8
5/16	5/8	5/8	15/16
5/16	11/16	3/4	1
5/16	3/4	3/4	1 1/16
3/8	9/16	600	15/16
3/8	5/8	5/8	1
3/8	11/16	3/4	1 1/16
3/8	3/4	3/4	1 1/8

TBR-B S.A.E. FLARE TYPE

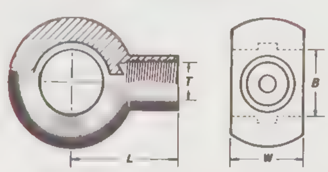


O D of Tube	Bolt	Width	Length
3/16	3/8	15/32	11/16
3/16	7/16	15/32	13/16
3/16	1/2	600	7/8
3/16	9/16	600	15/16
1/4	7/16	15/32	7/8
1/4	1/2	600	15/16
1/4	9/16	600	1
1/4	5/8	5/8	1 1/16
5/16	1/2	600	1
5/16	9/16	600	1 1/16
5/16	5/8	5/8	1 1/8
5/16	11/16	3/4	1 3/16
5/16	3/4	3/4	1 1/4
3/8	9/16	600	1 1/8
3/8	5/8	5/8	1 3/16
3/8	11/16	3/4	1 1/4
3/8	3/4	3/4	1 5/16

IMPORTANT

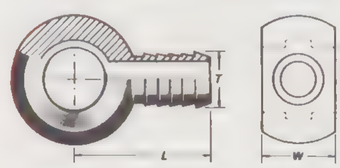
Spigot Size varies according to Tube Pressure. So that correct Size and Type will be dispatched to you, please specify Outside Diameter and Type of Tube together with Pressure of Tube.

TBR-E INVERTED FLARE TYPE



O D of Tube	Bolt	Width	Length
1/4	1/2	600	7/8
1/4	9/16	600	15/16
1/4	5/8	5/8	1
5/16	1/2	600	15/16
5/16	9/16	600	1
5/16	5/8	5/8	1 1/16
5/16	11/16	3/4	1 1/8
5/16	3/4	3/4	1 1/4

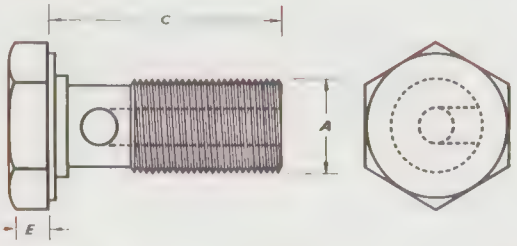
TBR-G AIR HOSE OR PLASTIC TUBE TYPE



O.D. of Tube	Bolt	Width	Length
3/16	5/16	11/32	15/16
3/16	3/8	15/32	1 1/16
3/16	7/16	15/32	1 1/16
3/16	1/2	600	1 1/8
1/4	3/8	15/32	1 1/16
1/4	7/16	15/32	1 1/16
1/4	1/2	600	1 1/8
1/4	9/16	600	1 3/16
5/16	7/16	15/32	1 1/16
5/16	1/2	600	1 1/4
5/16	9/16	600	1 5/16
5/16	5/8	5/8	1 3/8
3/8	1/2	600	1 3/16
3/8	9/16	600	1 1/4
3/8	5/8	5/8	1 5/16
3/8	11/16	3/4	1 3/8
3/8	3/4	3/4	1 7/16

TURNER BANJO REPLACEMENTS

TBR-L BANJO BOLTS



A Size	B Thread	C – Length Under Head	D – Hex.	E Head Thickness
	24 T.P.I.			
	24 T.P.I.			
	20 T.P.I			
	⅛ B.S.P			
	24 T.P.I	1		
	20 T.P.I	1		
	20 T.P.I	1		
	24 T.P.I	1		
	20 T.P.I	1		
	¼ B.S.P	1		
	½	1		
	⅜ B.S.P	1		
	½ B.S.P	1	1	

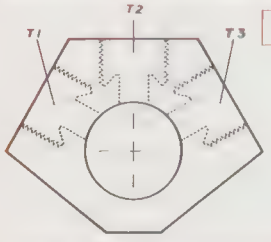
TBR-S FIBRE WASHERS

Inside Diameter	Outside Diameter
	1

TBR-T COPPER WASHERS

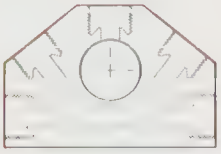
Inside Diameter	Outside Diameter
	1

TBR-H INVERTED FLARE THREE-WAY BANJOS



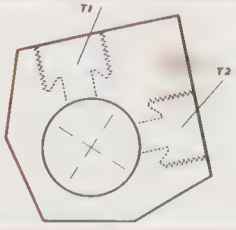
O D of T1 Tube	O D of T2 Tube	O D of T3 Tube	Bolt
			or
			½ or 9/16
			½ or 9/16

TBR-N (G.S.8) FIVE-WAY BANJOS



¼ Inverted Flare x 9/16 Bolt

TBR-J INVERTED FLARE TWO-WAY BANJOS

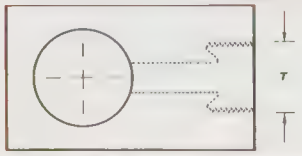


O.D. of T1 Tube	O.D. of T2 Tube	Bolt
		or
		or
		or
		or

TBR-OA (P2580) DIFFERENTIAL UNION BANJOS

⅛ Inverted Flare x ⅜ A.N.P End x 7/16 Bolt
¼ Inverted Flare x ¼ Inverted Flare (Gas Thread) End x 7/16 Bolt

TBR-K INVERTED FLARE SINGLE BANJOS

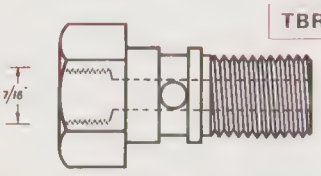


O.D. of Tube	Bolt
	½ or 9/16
	½ or 9/16
	½ or 9/16

TBR-P (P258/2) DIFFERENTIAL UNION BANJOS

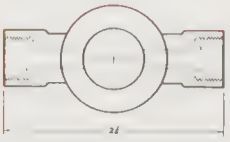
¼ Inverted Flare x 7/16 S.A.E. End x ½ Bolt

TBR-M (VHI-I) BANJO BOLT



½ x 20 N.F. Thread

TBR-R (B035/4) DOUBLE END UNION BANJOS



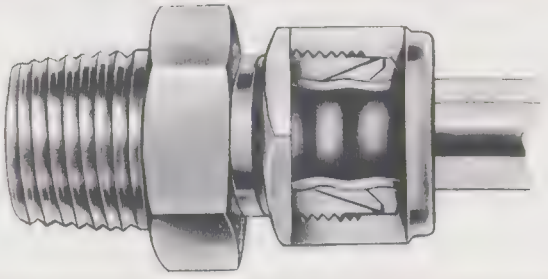
¼ Inverted Flare (Long Nut) x ½ Bolt

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

ALL DIMENSIONS IN INCHES

TURNER TURNLOK SWAGE-TYPE COMPRESSION FITTINGS

Type 316 Stainless Steel, Screwed B.S.P. or N.P.T. Thread
SS Stainless Steel Type 316
MS Mild Steel
B Brass
A Aluminium
T Titanium
Available in any machineable metal or plastic



TURNLOK No. 1SS

SWAGE FERRULE

O D of Tube	Alternate Part Number Front Ferrule	Back Ferrule
1/8	203-1	204-1
3/16	303-1	304-1
1/4	403-1	404-1
5/16	503-1	504-1
3/8	603-1	604 1
1/2	813-1	814-1
5/8	1013-1	1014-1
3/4	1213-1	1214-1
1	1613-1	1614-1

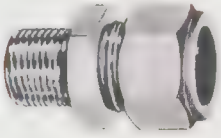
TURNLOK No. 2SS

SWAGE NUT

O D. of Tube	Alternate Part No
1/8	202 1
3/16	302 1
1/4	402-1
5/16	502 1
3/8	602-1
1/2	812-1
5/8	1012-1
1/4	1212-1
1	1612 1

TURNLOK No. 3SS

SINGLE SWAGE MALE UNION



O D of Tube	B.S.P. or N.P.T. Thread	Alternate Part No.
1/8	1/8	200-1-2
1/8	1/4	200-1-4
3/16	1/8	300-1-2
3/16	1/4	300-1-4
1/4	1/8	400-1-2
1/4	1/4	400-1-4
1/4	3/8	400-1-6
1/4	1/2	400-1-8
5/16	1/8	500-1-2
5/16	1/4	500-1-4
3/8	1/8	600-1-2
3/8	1/4	600-1-4
3/8	3/8	600-1-6
3/8	1/2	600-1-8
1/2	1/4	810-1-4
1/2	3/8	810-1-6
1/2	1/2	810-1-8
5/8	1/2	1010-1-8
5/8	3/4	1010-1-12
3/4	1/2	1210-1-8
3/4	3/4	1210-1-12
1	1/2	1610-1-8
1	3/4	1610-1-12
1	1	1610-1-16

TURNLOK No. 10SS

SINGLE SWAGE FEMALE UNION

O.D. of Tube	B S P or N P T Thread	Alternate Part No
1/8	1/8	200-7 2
3/16	1/8	300 7 2
1/4	1/8	400-7-2
1/4	1/4	400-7 4
1/4	3/8	400-7-6
5/16	1/8	500-7-2
5/16	1/4	500-7 4
3/8	1/8	600-7-2
3/8	1/4	600-7-4
3/8	3/8	600-7-6
3/8	1/2	600-7-8
1/2	1/4	810-7-4
1/2	3/8	810-7-6
1/2	1/2	810-7-8
5/8	1/2	1010-7-8
3/4	1/2	1210-7-8
1	3/4	1610-7-12

When ordering specify if B S P or N P T Thread

Example

TURNLOK No 3SS x 1/2 x 1/8 N P T
Single Swage Male Union

TURNLOK No. 4SS

DOUBLE SWAGE UNION

O D of Tube	Alternate Part No
1/8	200-6
3/16	300-6
1/4	400-6
5/16	500-6
3/8	600-6
1/2	810-6
5/8	1010-6
3/4	1210-6
1	1610-6

Reduction Sizes available

TURNLOK No. 31SS

DOUBLE SWAGE BULKHEAD UNION

O.D. of Tube	Alternate Part No.	Bulkhead Hole	Max Panel Thickness
1/8	200-61	21/64	1/8
3/16	300-61	29/64	1/8
1/4	400-61	29/64	17/32
5/16	500-61	33/64	9/16
3/8	600-61	37/64	9/16
1/2	810-61	49/64	19/32
5/8	1010-61	57/64	19/32
3/4	1210-61	1 1/64	25/32
1	1610-61	1 21/64	7/8

TURNLOK No. 11SS

DOUBLE SWAGE ELBOW

O D of Tube	Alternate Part No
1/8	200-9
3/16	300 9
1/4	400-9
5/16	500-9
3/8	600-9
1/2	810-9
5/8	1010-9
3/4	1210 9
1	1610-9

Reduction Sizes available

ALL DIMENSIONS IN INCHES

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

TURNER TURNLOK SWAGE-TYPE COMPRESSION FITTINGS

TURNLOK No. 5SS
SINGLE SWAGE MALE ELBOW

O.D. of Tube	B.S.P. or N.P.T. Thread	Alternate Part No
1/8	1/8	200-2-2
5/16	1/8	300-2-2
1/4	1/8	400-2-2
1/4	1/4	400-2-4
1/4	3/8	400-2-6
5/16	1/8	500-2-2
5/16	1/4	500-2-4
3/8	1/8	600-2-2
3/8	1/4	600-2-4
3/8	3/8	600-2-6
1/2	3/8	810-2-6
1/2	1/2	810-2-8
5/8	1/2	1010-2-8
1/4	1/2	1210-2-8
1/4	3/4	1210-2-12
1	3/4	1610-2-12

TURNLOK No. 12FSS
TWO-WAY FEMALE SWAGE TEE

O D of Tube	B.S.P or N.P.T Thread	Alternate Part No
1/8	1/8	200-3TTM
5/16	3/8	300-3TTM
1/4	1/8	400-3TTM
1/4	1/4	400-3-4TTM
5/16	1/8	500-3TTM
5/16	1/4	500-3-4TTM
3/8	1/4	600-3TTM
3/8	3/8	600-3-6TTM
1/2	3/8	600-3-8TTM
1	1/2	810-3TTM
1/2	3/4	810-3-8TTM
1/4	1/2	1210-3-8TTM
1/4	1/4	1210-3TTM
1	1/4	1610-3-12TTM

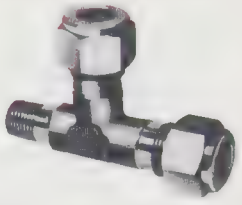
TURNLOK No. 12SS
TWO-WAY SWAGE TEE

O D of Tube	B.S.P. or N.P.T Thread	Alternate Part No
1/8	1/8	200-3TTF
5/16	1/8	300-3TTF
1/4	1/8	400-3TTF
1/4	1/4	400-3-4TTF
5/16	1/8	500-3TTF
5/16	1/4	600-3TTF
1/8	1/8	600-3-6TTF
1/2	1/8	810-3TTF
1/2	1/2	810-3-8TTF
5/8	1/2	1010-3TTF
1/4	1/2	1210-3-8TTF
1	1/4	1610 3-12TTF

TURNLOK No. 15SS
SINGLE SWAGE FEMALE ELBOW

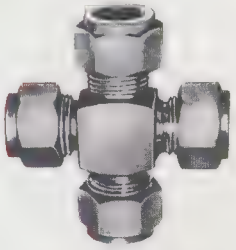
O D. of Tube	B.S.P. or N.P.T Thread	Alternate Part No
1/8	1/8	200-8-2
5/16	1/8	300-8-2
1/4	1/8	400-8-2
1/4	1/4	400-8-4
5/16	1/8	500-8-2
5/16	1/4	500-8-4
3/8	1/4	600-8-4
3/8	1/8	600-8-6
1/2	3/8	810-8-6
1/2	1/2	810-8-8
1/4	1/2	1210-8-8
1/4	3/4	1210-8-12
1	3/4	1610-8-12

TURNLOK No. 13SS
TWO-WAY VERTICAL SWAGE TEE



O D of Tube	B.S.P or N.P.T Thread	Alternate Part No
1/8	1/8	200-3TMT
5/16	1/8	300-3TMT
1/4	1/8	400-3TMT
1/4	1/4	400-3-4TMT
5/16	1/8	500-3TMT
3/8	1/4	600-3TMT
1/2	1/8	810-3TMT
1/2	1/2	810-3-8TMT
1/4	1/2	1210-3-8TMT
1/4	1/4	1210-3TMT
1	1/4	1610-3-12TMT

TURNLOK No. 68SS
FOUR-WAY SWAGE CROSS



O.D. of Tube	Alternate Part No.
1/8	200-4
5/16	300-4
1/4	400-4
5/16	500-4
3/8	600-4
1/2	810-4
5/8	1010-4
3/4	1210-4
1	1610-4

Reduction Sizes available

TURNLOK No. 14SS
THREE-WAY SWAGE TEE

O D of Tube	Alternate Part No
1/8	200-3
5/16	300-3
1/4	400-3
5/16	500-3
3/8	600-3
1/2	810-3
5/8	1010-3
3/4	1210-3
1	1610-3

Reduction Sizes available

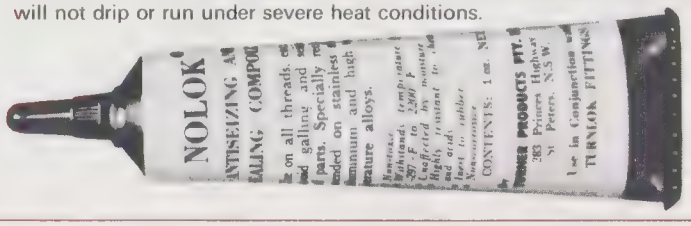
When ordering specify if B.S.P or N.P.T. Thread. If Brass Turnlok Fittings are required, use suffix 'B'.

Example

TURNLOK No 5B x 1/2 x 3/8 B.S.P
Single Swage Male Elbow

NOLOK®
ANTISEIZING AND SEALING AGENT

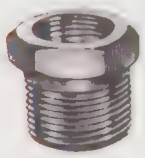
for use with stainless steel, steel, aluminium and high temperature alloys, non corrosive to metals, impervious to moisture and normal contamination, will not drip or run under severe heat conditions.



TURNER 316 STAINLESS STEEL SCREWED FITTINGS

No. 24SS

STAINLESS STEEL REDUCING BUSH



BSP or NPT Thread		BSP or NPT Thread
¼	x	⅛
⅜	x	¼
½	x	⅜
½	x	¼
¾	x	⅜
¾	x	½
1	x	¾
1	x	1

No. 25SS

STAINLESS STEEL M & F ELBOW

BSP or NPT Thread
⅛
¼
⅜
½
¾
1

No. 26SS

STAINLESS STEEL SOCKET
(Round also Available)

BSP or NPT Thread
⅛
¼
⅜
½
¾
1

No. 27SS

STAINLESS STEEL HEX. NIPPLE

BSP or NPT Thread
⅛
¼
⅜
½
¾
1

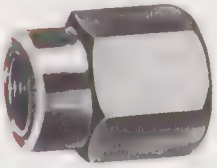
No. 28SS

STAINLESS STEEL LONG NIPPLE

BSP or NPT. Thread	Length
⅛	1½
⅛	2
¼	1½
¼	2

No. 29SS

STAINLESS STEEL REDUCING SOCKET
(Round also Available)



B.S.P. or N.P.T. Thread		BSP or NPT Thread
¼	x	⅛
⅜	x	¼
½	x	⅜
½	x	¼
¾	x	½
1	x	¾
1	x	½

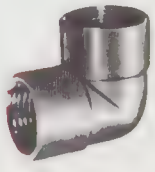
No. 33SS

STAINLESS STEEL CAP

BSP or NPT Thread
⅛
¼
⅜
½
¾
1

No. 34SS

STAINLESS STEEL FEMALE ELBOW



BSP or NPT Thread
⅛
¼
⅜
½
¾
1

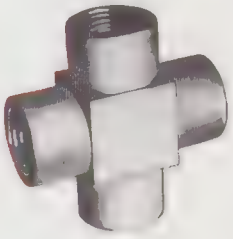
No. 35SS

STAINLESS STEEL FEMALE TEE

BSP or NPT Thread
⅛
¼
⅜
½
¾
1

No. 37SS

STAINLESS STEEL FEMALE CROSSES



BSP or NPT Thread
⅛
¼
⅜
½
¾
1

No. 38SS

STAINLESS STEEL UNION BODY
(suit P5SS Tail and 45SS Nut)

Tail and Nut Size		B.S.P. or N.P.T. Thread
⅜ (⅛ B.S.P.)	x	⅛
¼ (¼ B.S.P.)	x	¼
⅝ (¼ B.S.P.)	x	¼
⅜ (⅜ B.S.P.)	x	¼
½ (½ B.S.P.)	x	½
½ (½ B.S.P.)	x	½
¾ (¾ B.S.P.)	x	¾
1 (1 B.S.P.)	x	1

ALL DIMENSIONS IN INCHES

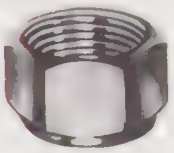
ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

TELEPHONE: 648 8501

TURNER 316 STAINLESS STEEL SCREWED FITTINGS

No. 45SS

STAINLESS STEEL NUT
(Use with P5SS Tail and 38SS Union)



Tube	Thread
1/16	1/8 B S P
1/4	1/4 B S P
5/16	1/4 B S P
3/8	3/8 B S P
1/2	1/2 B S P
5/8	3/4 B S P
1	1 B S P

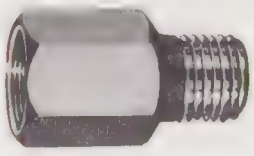
No. 64SS

STAINLESS STEEL PLUG

B.S.P. or N.P.T Thread
1/8
1/4
3/8
1/2
3/4
1

No. 72SS

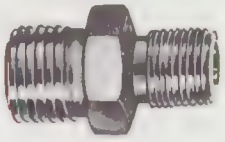
STAINLESS STEEL ADAPTOR



B S P or N P T Thread		B S P or N P T. Thread
1/4	x	1/8
1/8	x	1/4
1/8	x	3/8
1/2	x	1/4
1/2	x	3/8
1/4	x	1/2
1	x	3/4

No. 73SS

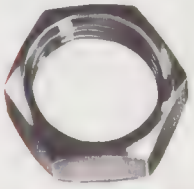
STAINLESS STEEL REDUCING NIPPLE



B.S P or N P.T. Thread		B S P. or N P T Thread
1/4	x	1/8
1/8	x	1/8
1/8	x	1/4
1/2	x	1/4
1/2	x	3/8
3/4	x	1/2
3/4	x	1/2
1	x	3/4
1	x	1

No. 74SS

STAINLESS STEEL LOCKNUT



B.S.P. or N P T Thread
1/8
1/4
3/8
1/2
3/4
1

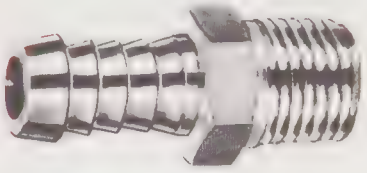
No. P5SS

STAINLESS STEEL BARBED TAIL

I.D. of Tube	Nut Size
3/16	3/16 (1/4 B S P.)
1/4	1/4 (1/4 B.S P.)
5/16	5/16 (1/4 B.S.P.)
3/8	3/8 (3/8 B.S.P.)
1/2	1/2 (1/2 B.S.P.)
3/4	3/4 (3/4 B S P.)
1	1 (1 B.S P.)

No. P3SS

STAINLESS STEEL BARBED TAIL



I D of Tube		B S P or N P T Thread
3/16	x	1/8
1/4	x	1/8
5/16	x	1/4
5/16	x	1/4
3/8	x	1/4
3/8	x	3/8
1/2	x	3/8
1/2	x	1/2
5/8	x	1/2
3/4	x	1
1	x	1

No. P7SS

STAINLESS STEEL HOSE JOINER

I D of Tube
1/16
1/4
5/16
3/8
1/2
3/4
1

ALL FITTINGS AVAILABLE IN B.S.P. OR N.P.T. THREAD

ALL DIMENSIONS IN INCHES

AIRLINE FITTINGS "W" Series Tailpieces (Standard)

	I.D. of Tube	Male B.S.P Thread
W 3TM2	3/16	1/8
W 4TM2	1/4	1/8
W 5TM2	5/16	1/8
W 6TM2	3/8	1/8
W 8TM2	1/2	1/8
W 3TM4	3/16	1/4
W 4TM4	1/4	1/4
W 5TM4	5/16	1/4
W 6TM4	3/8	1/4
W 8TM4	1/2	1/4
W 4TM6	1/4	3/8
W 5TM6	5/16	3/8
W 6TM6	3/8	3/8
W 8TM6	1/2	3/8
W 12TM6	3/4	3/8
W 4TM8	1/4	1/2
W 5TM8	5/16	1/2
W 6TM8	3/8	1/2
*W 8TM8	1/2	1/2
*W 12TM8	3/4	1/2
*W 16TM8	1	1/2
W 8TM12	1/2	3/4
W 12TM12	3/4	3/4
W 16TM12	1	3/4
W 12TM16	3/4	1
W 16TM16	1	1

*Also Available in Steel, Suffix "S"

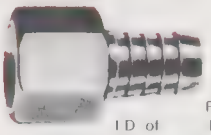
TURNER No. P11
Double Barb Elbow
Tube up to 1" x 1"
Reduction Sizes Available

TURNER No. P7

	I.D. of Tube
W 3DET	3/16
W 4DET	1/4
W 5DET	5/16
W 6DET	3/8
W 8DET	1/2

	I.D. of Tube	B.S.P Thread
W 3TN2	3/16	1/8
W 4TN4	1/4	1/4
W 5TN4	5/16	1/4
W 6TN4	3/8	1/4
W 6TN6	3/8	3/8
W 8TN8	1/2	1/2

TURNER No. P12
B.S.P. to Barbed 2-way Tee
B.S.P. on Branch
Tube up to 1" x 1" x 3/4" B.S.P.
Reduction Sizes Available



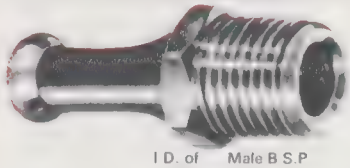
	I.D. of Tube	Female B.S.P Thread
W 4TSHF	1/4	Barb Schrader female
W 3TF2	3/16	1/8
W 3TF4	3/16	1/4
W 4TF4	1/4	1/4
W 5TF4	5/16	1/4
W 6TF4	3/8	1/4
W 8TF4	1/2	1/4
W 4TF6	1/4	3/8
W 5TF6	5/16	3/8
W 6TF6	3/8	3/8
W 8TF6	1/2	3/8
W 12TF6	3/4	3/8
W 4TF8	1/4	1/2
W 5TF8	5/16	1/2
W 6TF8	3/8	1/2
*W 8TF8	1/2	1/2

TURNER No. P6 ELBOW

I.D. of Tube		B.S.P Thread
3/16	x	1/8
1/4	x	1/8
1/4	x	1/4
5/16	x	1/4
3/8	x	3/8
1/2	x	1/4

TURNER No. P14
3-way Barbed Tee
Equal Sizes up to 1" Tube
Reduction Sizes Available

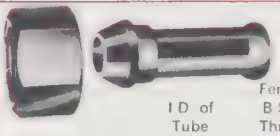
"ZY" HOSE FITTINGS for P.V.C. or Synthetic Rubber Hose



	I.D. of Tube	Male B.S.P Thread
ZY 3TM2	3/16	1/8
ZY 4TM2	1/4	1/8
ZY 5TM2	5/16	1/8
ZY 6TM2	3/8	1/8
ZY 8TM2	1/2	1/8
ZY 3TM4	3/16	1/4
ZY 4TM4	1/4	1/4
ZY 5TM4	5/16	1/4
ZY 6TM4	3/8	1/4
ZY 8TM4	1/2	1/4
ZY 3TM6	3/16	3/8
ZY 4TM6	1/4	3/8
ZY 5TM6	5/16	3/8
ZY 6TM6	3/8	3/8
ZY 8TM6	1/2	3/8
ZY 12TM6	3/4	3/8
ZY 4TM8	1/4	1/2
ZY 5TM8	5/16	1/2
ZY 6TM8	3/8	1/2
ZY 8TM8	1/2	1/2
ZY 12TM8	3/4	1/2
ZY 8TM12	1/2	3/4
ZY 12TM12	3/4	3/4
ZY 16TM12	1	3/4
ZY 12TM16	3/4	1
ZY 16TM16	1	1

	I.D. of Tube	Female B.S.P Thread
ZY 3TF2	3/16	1/8
ZY 4TF2	1/4	1/8
ZY 3 TF4	3/16	1/4
ZY 4TF4	1/4	1/4
ZY 5TF2	5/16	1/8
ZY 6TF4	3/8	1/4
ZY 8TF4	1/2	1/4
ZY 4TF6	1/4	3/8
ZY 5TF6	5/16	3/8
ZY 6TF6	3/8	3/8
ZY 8TF6	1/2	3/8
ZY 12TF6	3/4	3/8
ZY 4TF8	1/4	1/2
ZY 5TF8	5/16	1/2
ZY 6TF8	3/8	1/2
ZY 8TF8	1/2	1/2

	I.D. of Tube Each End
ZY 3DET	3/16
ZY 4DET	1/4
ZY 5DET	5/16
ZY 6DET	3/8
ZY 8DET	1/2



	I.D. of Tube	Female B.S.P Thread
ZY 3TN2	3/16	1/8
ZY 3TN4	3/16	1/4
ZY 4TN4	1/4	1/4
ZY 5TN4	5/16	1/4
ZY 6TN4	3/8	1/4
ZY 8TN4	1/2	1/4
ZY 4TN6	1/4	3/8
ZY 5TN6	5/16	3/8
ZY 6TN6	3/8	3/8
ZY 8TN6	1/2	3/8
ZY 6TN8	3/8	1/2
ZY 8TN8	1/2	1/2
ZY 12TN12	3/4	3/4
ZY 16TN16	1	1
ZY 20TN20	1 1/4	1 1/4

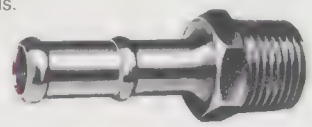
	I.D. of Tube	
ZY AB3	3/16	No. 31 Adaptor Tail
ZY AB4	1/4	No. 31 Adaptor Tail
ZY AB5	5/16	No. 31 Adaptor Tail
ZY AB6	3/8	No. 31 Adaptor Tail
ZY AB8	1/2	No. 31 Adaptor Tail

ALL DIMENSIONS IN INCHES

AIRLINE FITTINGS

ZYD SERIES TAILPIECES

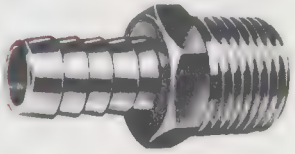
Double Ball Type especially designed for P.V.C. Hose of larger diameters for two hose clips and greater support for hose ends.



	I.D. of Tube	Male B.S.P. Thread
ZYD 8TM8	½	½
ZYD 8TM12	½	¾
ZYD 12TM12	¾	¾
ZYD 12TM8	¾	½
ZYD 16TM16	1	1

SWIVEL TAILPIECES

A very useful Fitting for many applications.
Allows easy removal or assembly without twisting hose.



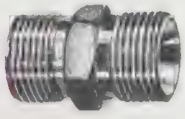
WS SERIES

	I.D. of Tube	Male B.S.P. Thread
WS 4TM4	¼	¼
WS 6TM6	⅜	⅜
WS 8TM8	½	½
WS 12TM12	¾	¾

ZYS SERIES

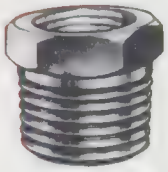
	I.D. of Tube	Male B.S.P Thread
ZYS 4TM4	¼	¼
ZYS 6TM6	⅜	⅜
ZYS 8TM8	½	½
ZYS 12TM12	¾	¾

HEXAGON CONNECTORS – CONED



	B.S.P Taper Thread	B.S.P Parallel Thread
37 x 2 x 2	⅛	⅛
37 x 2 x 4	⅛	¼
37 x 2 x 6	⅛	⅜
37 x 2 x 8	⅛	½
37 x 4 x 2	¼	⅛
37 x 4 x 4	¼	¼
37 x 4 x 6	¼	⅜
37 x 4 x 8	¼	½
37 x 6 x 2	⅜	⅛
37 x 6 x 4	⅜	¼
37 x 6 x 6	⅜	⅜
37 x 6 x 8	⅜	½
37 x 8 x 2	½	⅛
37 x 8 x 4	½	¼
37 x 8 x 6	½	⅜
37 x 8 x 8	½	½
37 x 12 x 8	¾	½
37 x 12 x 12	¾	¾
37 x 16 x 16	1	1

REDUCING BUSHES – CONED



	B.S.P Thread
RB 4 x 2	¼ x ⅛
RB 6 x 2	⅜ x ⅛
RB 8 x 2	½ x ⅛
RB 12 x 2	¾ x ⅛
RB 6 x 4	⅜ x ¼
RB 8 x 4	½ x ¼
RB 12 x 4	¾ x ¼
RB 8 x 6	½ x ⅜
RB 12 x 4	¾ x ¼
RB 12 x 6	¾ x ⅜
RB 12 x 8	¾ x ½

HEXAGON NIPPLES – CONED

	B.S.P Taper Thread
HN2	⅛ x ⅛
HN4	¼ x ¼
HN6	⅜ x ⅜
HN8	½ x ½

HEXAGON UNIONS – CONED

	B.S.P Parallel Thread
38 x 2 x 2	⅛
38 x 4 x 4	¼
38 x 4 x 6	¼ x ⅜
38 x 6 x 6	⅜
38 x 6 x 8	⅜ x ½
38 x 8 x 8	½
38 x 10 x 10	⅝ U.N.F. Thread

HEXAGON TAPER PLUGS

	B.S.P Thread
HP2	⅛
HP4	¼
HP6	⅜
HP8	½
HP12	¾

SLEEVES

	B.S.P Thread
3120/2	⅛
3120/4	¼
3120/6	⅜
3120/8	½

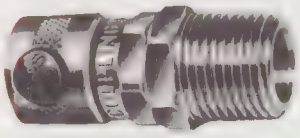
EXPLANATION OF PART NUMBERING

F = Female thread
M = Male thread
T = Tailpiece
H = Hose
N = Nut
DET = Double ended tailpiece
W = Standard type tailpiece barb
ZY = Ball type tailpiece barb
U = Triple grip fittings
S = Swivel tailpiece
TEE = Tee
E = Elbow

All numerals represent 1/16", hence W 4TM4 equals Standard type ¼" tail with ¼" male gas thread. ZY 6TM8 equals Ball type tail with ⅜" tail and ½" male gas thread. 310 F4 equals 310 coupling with ¼" gas female thread.

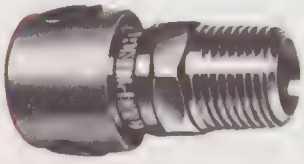
AIRLINE FITTINGS

310A SERIES COUPLINGS (Single Grip)



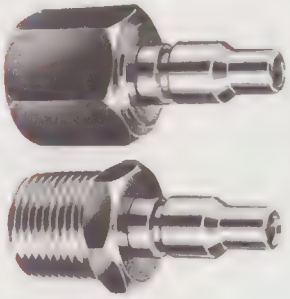
No 310 M2	¼ B.S.P Male
No 310 F4	¼ B S P Female
No 310 M4	¼ B.S.P Male
No 310 M6	⅜ B.S.P Male
No 310 M8	½ B.S.P. Male
No 310 F8	½ B.S P. Female

320A SERIES COUPLINGS (Double Grip)



No 320 M2	¼ B S P Male
No 320 F4	¼ B S.P. Female
No. 320 M4	¼ B.S.P. Male
No 320 M6	⅜ B.S.P. Male
No 320 M8	½ B.S.P Male
No 320 F8	½ B S P Female

ADAPTORS



No 31 M4	¼ B S P Male
No 31 M4S	¼ B S P Male Steel
No 31 F4	¼ B.S.P. Female
No 31 F4S	¼ B S.P. Female Steel
No 31 M2	⅛ B S.P Male
No 31 M2S	⅛ B S.P. Male Steel
No 31 F2	⅛ B S P Female
No. 31 F5	5/16 x 26 T P I Female
No 31 SHF	Schrader Female
No 31 M6	⅜ B S P Male
No 31 F6	⅜ B S P Female

ADAPTOR BARBS

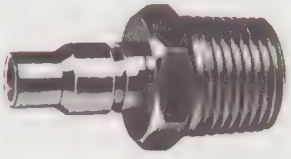
No. 31 T2	⅛ Barb
No 31 T3	3/16 Barb
No 31 T4	¼ Barb
No 31 T5	5/16 Barb
No 31 T6	⅜ Barb
No 31 T8	½ Barb

350 SERIES

Will pass 60 cu. ft. free air per minute into atmosphere at 90 P.S.I.

No 350 F4	¼ B S P Female
No 350 M4	¼ B S P Male
No 350 M6	⅜ B S P Male
No 350 M8	½ B S P Male
No 350 F8	½ B S P Female

ADAPTORS



No 35 M4	¼ B S P Male
No 35 F4	¼ B S P Female
No 35 M6	⅜ B S P Male
No 35 M8	½ B S P Male
No 35 F6	⅜ B S P Female

330 HEAVY DUTY COUPLINGS

Will operate air tools up to 100 C.F.M

No 330 F8 ½ B S P Female

Only one size made, for other threads use reducing nipples or bushes

ADAPTORS

33 M8	½ B.S.P Male
33 F8	½ B S P Female
33 T8	½ Barb Adaptor

ADAPTOR BARBS

W 35 T6	⅜ Barb Tailpiece
W 35 T8	½ Barb
ZY 35 T6	⅜ Ball Type Tailpiece
ZY 35 T8	½ Ball Type Tailpiece

TAILPIECES (STEEL)

33 8TM8	½ Barb	½ B S P Male
33 8TF8	½ Barb	½ B S P Female
33 12TM8	¾ Barb	½ B S P Male
33 16TM8	1 Barb	½ B S P Male

BLOW GUNS

No. 412 LONG NOSE TYPE

No. 413

LEVER TYPE

No. 412 FJ FAN JET TYPE

No. 411 SHORT NOSE TYPE

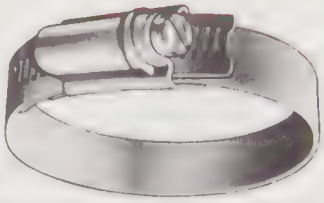
COUPLING AND BLOW GUN PARTS

350	311			
No 350/4	No 311/4	Coupling Valves	No 411/3	Blow Gun Valve
No 350/7	No 311/7	Springs Coupling and Blow Gun	No 411/4	Blow Gun Valve Seat (Neoprene)
No 350/8	No 311/8	Coupling Valve Seat (Neoprene)	No 412/2	Nozzle to fit No 412 Blow Gun
No 350/9	No 311/9	"O" Ring	No 411/2	Nozzle to fit No 411 Blow Gun

HOSE CLIPS

UTILUX STANDARD

Cad. Plated Steel with Non-slip Safety Collar



Catalogue Number	Old Number	Outside Diameter of Hose	
		Minimum	Maximum
H 038	M00	7/16″	9/16″
H 039	00	1/2″	3/4″
H 040	0	5/8″	1″
H 041	1	7/8″	1 1/2″
H 051	1A	7/8″	1 1/4″
H 049	1X	1 3/8″	1 5/8″
H 042	2	1 3/8″	2 1/8″
H 042X	2X	1 3/4″	2 1/4″
H 043	3	2″	2 3/4″
H 044	4	2 5/8″	3 1/2″
H 045	5	3 3/8″	4 1/4″
H 046	6	4 1/8″	5 1/8″
H 047	7	5″	6 1/8″
H 048	8	6″	7 1/8″
H 052	6 1/4″	—	8″
H 053	7 1/4″	—	9″
H 059	8 1/4″	—	10″
H 060	9 1/4″	—	11″
H 061	10 1/4″	—	12″

FENTER — Worm Drive Models BS3628-1963

Cad. Plated Steel

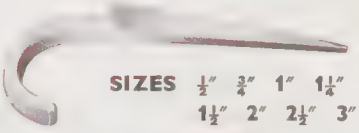
British Standard Size	Previous Fenter Size	Outside Diameter of Hose	
		Inches	m.m.
050 S	M00	3/8 – 1/2	10 – 13
062 S	00	1/2 – 5/8	13 – 16
075 S	—	1/2 – 3/4	13 – 19
087 S	0	5/8 – 7/8	16 – 22
100 S	—	3/4 – 1	19 – 25
112 S	0X	7/8 – 1 1/8	22 – 29
137 S	1A	1 – 1 3/8	25 – 35
162 S	1X	1 1/8 – 1 5/8	29 – 41
187 S	2A	1 1/4 – 1 7/8	32 – 48
212 S	2	1 1/2 – 2 1/8	38 – 54
237 S	2X	1 3/8 – 2 3/8	45 – 61
275 S	3	2 – 2 3/4	51 – 70
312 S	—	2 3/8 – 3 1/8	61 – 79
350 S	4	2 3/4 – 3 1/2	70 – 89
400 S	4X	3 1/4 – 4	82 – 102
450 S	5	3 3/4 – 4 1/2	95 – 115
500 S	6	4 1/8 – 5	105 – 127
575 S	—	5 – 5 3/4	127 – 146
625 S	—	5 1/2 – 6 1/4	140 – 158

UTILUX STAINLESS STEEL

Catalogue Number	Outside Diameter of Hose		Old Number
	Minimum	Maximum	
H 4038	7/16″	9/16″	—
H 4039	1/2″	3/4″	6408
H 4040	5/8″	1 1/16″	6410
H 4041	7/8″	1 1/2″	6412 / 6416
H 4049	1 3/8″	1 3/4″	6420
H 4042	1 3/8″	2 1/4″	6424 / 6428
H 4043	2″	2 3/4″	6432 / 6436
H 4044	2 5/8″	3 1/2″	6440 / 6444 / 6448
H 4045	3 3/8″	4 1/4″	6452 / 6456 / 6460
H 4046	4 1/8″	5 1/8″	6464 / 6472 / 6476
H 4047	5″	6 1/8″	6480 / 6488
H 4048	6″	7 1/8″	64104
H 4052	6 1/2″	8″	—
H 4053	7 1/2″	9″	—
H 4059	8 1/2″	10″	—
H 4060	9 1/2″	11″	—
H 4061	10 1/2″	12″	—

L186

PIPE HOOK GALVANISED



SIZES 1/2″ 3/4″ 1″ 1 1/4″ 1 1/2″ 2″ 2 1/2″ 3″

L187

PIPE SADDLE GALVANISED

SIZES TO SUIT 1/2″ 3/4″ 1″ 1 1/4″ 1 1/2″ 2″ 2 1/2″ 3″ 4″ Galv. pipe

L188

PIPE HANGING CLIP

Supplied Complete with Bolts and Nuts, and Welding Lug.

SIZES 1/2″ 3/4″ 1″ 1 1/4″ 1 1/2″ 2″ 2 1/2″ 3″ 4″

L189 — **CLIP HOSE CLIPS**

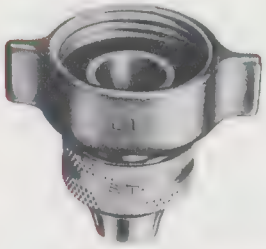
SIZES

1/4″ 5/16″ 7/16″ 1/2″ 9/16″
5/8″ 3/4″ 7/8″ 1″ 1 1/8″
1 5/16″ 1 7/16″ 1 1/2″ 1 5/8″ 1 3/4″
1 7/8″ 2 1/16″ 2 1/4″ 2 1/2″ 2 5/8″

HOSE FITTINGS — BRASS FOR PLASTIC HOSE

"A" Series ½" Hose
"B" Series ¾" Hose

NUT AND TAIL



Number	BSP x Hose Nut		Replacement Washer No.
A.14	¾"	½"	W.2
A.54	1"	½"	W.3
B.145	¾"	¾"	W.2
B.15	1"	¾"	W.4
B.165	1¼"	¾"	W.5

DIRECTOR CONNECTOR (Tailpiece)

Number	BSP x Hose Nut		Replacement Washer No.
A.24	¼"	½"	W.1
A.114	¾"	½"	
B.95	¾"	¾"	
B.115	½"	¾"	

CASCADE ADJUSTABLE NOZZLES

"S" 42 ¼" B.S.P.

"S" 411 ¾" B.S.P.

JETSTOP DIRECTORS

J.24 ¼" B.S.P.

J.114 ¾" B.S.P.

PLAIN TAP FITTING

Number	Plain Bib x Hose	
A.234	½"	½"
A.2384	⅝"	⅜"

JOINER

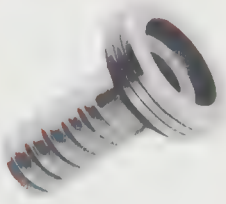
Number	Hose
A.34	½"
B.35	¾"

HOSE FITTINGS — BRASS FOR RUBBER HOSE

NUT AND TAIL

Number	BSP x Hose Nut		Replacement Washer No.
17–13	½"	½"	51–06
17–01	¾"	½"	51–28
17–14	¾"	¾"	51–24
17–03	1"	½"	51–03
17–02	1"	¾"	51–03
17–17	1"	1"	51–03
17–05	1¼"	¾"	51–23
17–04	1¼"	1"	51–23

TAILPIECE



Number	BSP x Hose	
20–01	½"	½"
20–02	¾"	½"
20–03	¾"	¾"
20–04	¾"	1"
20–06	1"	¾"

Line Connection B.S.P.	½"	¾" x ½" Bib	1"	1¼"	1½"	2"
Bib Connection for Nut, Tail B.S.P.	¾"	1"		1¼"	1½"	2"	

GEYSER NOZZLE

51.24 ¼" B.S.P. 36.01
¾" B.S.P. 36.03

HOSE MENDERS (Clincher)

Number	Hose
15.12	½"
15.04	¾"
15.07	1"

HOSE CLAMPS Rubber Hose

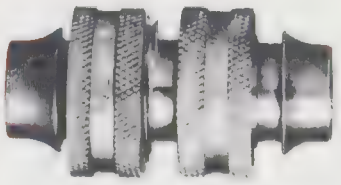
Number	Hose
16.02	⅜"
16.03	½"
16.04	⅝"
16.05	¾"
16.06	1"

NETA FITTINGS FOR POLYTHENE PIPING

POLYTHENE TO MALE B.S.P. END CONNECTORS

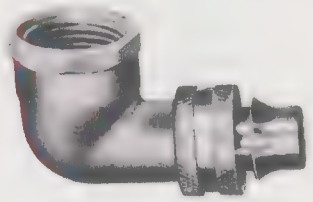
P12	½″ x ½″	Male B.S.P.
P15	¾″ x ¾″	Male B.S.P.
P15/2	¾″ x ½″	Male B.S.P.
P13	1″ x 1″	Male B.S.P.
P13/5	1″ x ¾″	Male B.S.P.
P16	1¼″ x 1¼″	Male B.S.P.
P16/3	1¼″ x 1″	Male B.S.P.
P17	1½″ x 1½″	Male B.S.P.
P17/6	1½″ x 1¼″	Male B.S.P.
P19	2″ x 2″	Male B.S.P.
P19/7	2″ x 1½″	Male B.S.P.

POLYTHENE JOINERS



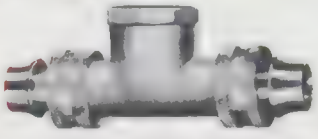
P32	½″ x ½″
P35	¾″ x ¾″
P33	1″ x 1″
P36	1¼″ x 1¼″
P37	1½″ x 1½″
P39	2″ x 2″

POLYTHENE TO FEMALE B.S.P. ELBOW



P52	½″ x ½″	Female B.S.P.
P55	¾″ x ¾″	Female B.S.P.
P55/2	¾″ x ½″	Female B.S.P.
P53	1″ x 1″	Female B.S.P.
P53/5	1″ x ¾″	Female B.S.P.

POLYTHENE TO FEMALE B.S.P. TEE

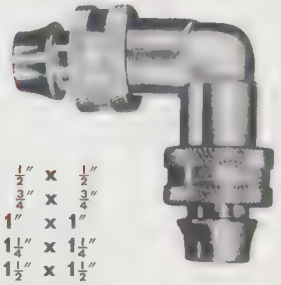


P22	½″ x ½″ x ½″	Female B.S.P.
P25	¾″ x ¾″ x ¾″	Female B.S.P.
P25/2	¾″ x ¾″ x ½″	Female B.S.P.
P23	1″ x 1″ x 1″	Female B.S.P.
P23/5	1″ x 1″ x ¾″	Female B.S.P.
P26/3	1¼″ x 1¼″ x 1″	Female B.S.P.
P27/6	1½″ x 1½″ x 1¼″	Female B.S.P.

POLYTHENE 3-WAY TEE

P42	½″ x ½″ x ½″	
P34	¾″ x ¾″ x ¾″	
P45/2	¾″ x ¾″ x ½″	
P43	1″ x 1″ x 1″	
P43/5	1″ x 1″ x ¾″	
P46	1¼″ x 1¼″ x 1¼″	
P47	1½″ x 1½″ x 1½″	

POLYTHENE 2-WAY ELBOWS



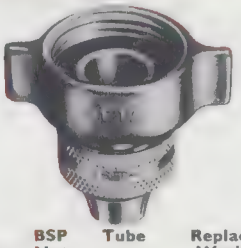
P62	½″ x ½″
P65	¾″ x ¾″
P63	1″ x 1″
P66	1¼″ x 1¼″
P67	1½″ x 1½″
P69	2″ x 2″

NETA HOSE FITTINGS — BRASS FOR P.V.C. TUBE

END CONNECTOR

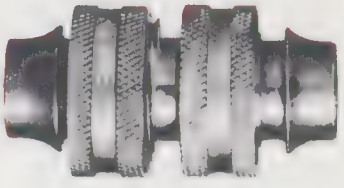
Number	BSP	x Tube
A.152	½″	½″
A.162	¾″	½″
B.85	½″	¾″
B.25	¾″	¾″
B.75	1″	¾″
C.63	1″	1″

NUT AND TAIL



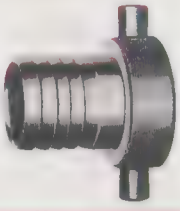
Number	BSP Nut	Tube	Replacement Washer No.
C.53	1″	1″	W.4
C.23	1¼″	1″	W.5

JOINER



Number	Tube
C.73	1″

HOSE FITTINGS — GUNMETAL



L190

NUT AND TAIL

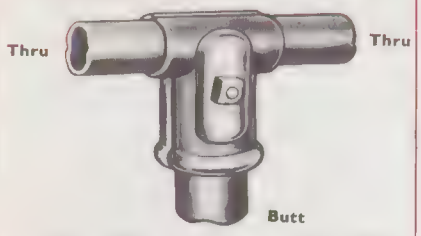
B.S.P. SIZES

½″ ¾″ 1″ 1¼″ 1½″ 2″ 2½″ 3″ 4″

TAILPIECE

"DOWN-EE" PRESSED STEEL FITTINGS

TEES (GALV.)



New No.	Old No.	Thru	Butt	Cup Head Bolts (1)
T22	215	½″ to ½″		1½″ x ¼″
T32	228	¾″ to ½″		1¾″ x ¼″
T33	107	¾″ to ¾″		2″ x 5/16″
T34	205	¾″ to 1″		2¼″ x 5/16″
T43	108	1″ to ¾″		2″ x 5/16″
T44	109	1″ to 1″		2¼″ x 5/16″
T45	113	1″ to 1¼″		2¾″ x ⅜″
T46	158	1″ to 1½″		3″ x ⅜″
T54	110	1¼″ to 1″		2¾″ x ⅜″
T55	111	1¼″ to 1¼″		2¾″ x ⅜″
T56	159	1¼″ to 1½″		3″ x ⅜″
T58	230	1¼″ to 2″		3½″ x 7/16″
T64	112	1½″ to 1″		2¼″ x ⅜″
T65	203	1½″ to 1¼″		3″ x ⅜″
T66	162	1½″ to 1½″		3¼″ x ⅜″
T68	214	1½″ to 2″		3½″ x 7/16″
T84	227	2″ to 1″		2¾″ x ⅜″
T85	201	2″ to 1¼″		3¼″ x ⅜″
T86	188	2″ to 1½″		4″ x 7/16″
T88	157	2″ to 2″		4″ x 7/16″
T124	226	3″ to 1″		2¾″ x ⅜″
T125	208	3″ to 1¼″		3¼″ x ⅜″
T126	247	3″ to 1½″		3¼″ x 7/16″

KNOBS (GALV.)

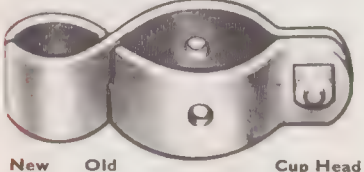
New No.	Old No.	For Pipe Diam.
K3	209	¾″
K4	155	1″
K5	154	1¼″
K6	153	1½″
K8	161	2″
K12		3″

New No.	Old No.	For Pipe Diam.
K10	233 Weldon	2½″
K16	234 Weldon	4″

These knobs are made to Butt-Weld on to pipes as shown in illustrations.

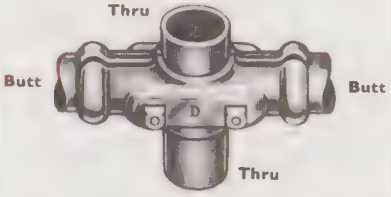
Knobs are attached to pipe by a light driving fit.

CROSS-OVER TYPE HINGE (GALV.)



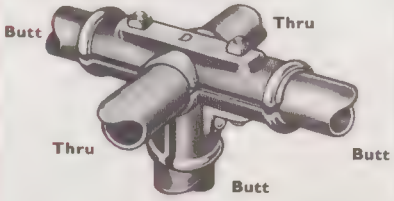
New No.	Old No.	Post Gate	Cup Head Bolts (1)
H33	192	¾″ x ¾″	1¼″ x ⅜″
H43	191	1″ x ¾″	1½″ x ⅜″
H53	194	1¼″ x ¾″	1½″ x ⅜″
H63	200	1½″ x ¾″	1½″ x ⅜″
H83	127	2″ x ¾″	1¾″ x ⅜″
H44	198	1″ x 1″	1¼″ x ⅜″
H54	193	1¼″ x 1″	1¼″ x ⅜″

CROSSES (GALV.)



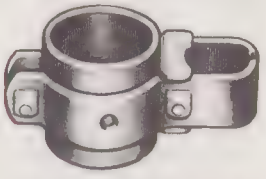
New No.	Old No.	Butt Thru	Cup Head Bolts (2)
X22	216	½″ to ½″	1½″ x ¼″
X33	106	¾″ to ¾″	2″ x 5/16″
X34	105	¾″ to 1″	2¼″ x 5/16″
X44	104	1″ to 1″	2¼″ x 5/16″
X45	103	1″ to 1¼″	2¾″ x ⅜″
X46	101	1″ to 1½″	3″ x ⅜″
X48	248	1″ to 2″	3¼″ x ⅜″
X55	102	1¼″ to 1¼″	3¼″ x ⅜″
X56	147	1¼″ to 1½″	3″ x ⅜″
X58	204	1¼″ to 2″	3¼″ x 7/16″
X66	160	1½″ to 1½″	3¼″ x ⅜″
X68	156	1½″ to 2″	3¼″ x 7/16″
X88	217	2″ to 2″	4″ x 7/16″

FIVE WAY TEES (GALV.)



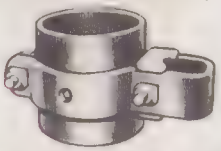
No	Butt Thru	Cup Head Bolts (3)
FT44	1″ to 1″	2¼″ x ⅜″
FT45	1″ to 1¼″	2¼″ x ⅜″
FT56	1¼″ to 1½″	3″ x ⅜″

TWO PART. TYPE HINGE (WITH ATTACHMENT)



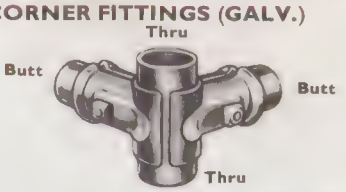
H64	199	1½″ x 1″	1¼″ x ⅜″ & 2¼″ x ⅜″
H84	202	2″ x 1″	1¼″ x ⅜″ & 2¼″ x ⅜″
H85	206	2″ x 1½″	1¼″ x ⅜″ & 2½″ x ⅜″

STRAP TYPE HINGE (WITH ATTACHMENT)



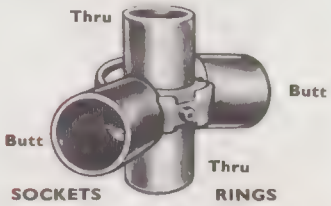
H124	210	3″ x 1″	2¾″ x ⅜″ & 2¼″ x ⅜″
H125	211	3″ x 1½″	2¾″ x ⅜″ & 3″ x ⅜″
H126	212	3″ x 1½″	2¾″ x ⅜″ & 3¼″ x ⅜″
H165	231	4″ x 1½″	2¾″ x ⅜″ & 3¼″ x ⅜″
H166	232	4″ x 1½″	3″ x ⅜″ & 3¼″ x ⅜″

CORNER FITTINGS (GALV.)



New No.	Old No.	Butt Thru	Cup Head Bolts(2)
C22	229	½″ to ½″	1½″ x ¼″
C33	186	¾″ to ¾″	2″ x 5/16″
C34	180	¾″ to 1″	2″ x 5/16″
C44	181	1″ to 1″	2¼″ x 5/16″
C45	182	1″ to 1¼″	2¼″ x ⅜″
C46	184	1″ to 1½″	2¾″ x ⅜″
C55	183	1¼″ to 1¼″	3″ x ⅜″
C56	185	1¼″ to 1½″	3″ x ⅜″
C58	213	1¼″ to 2″	3″ x ⅜″
C66	187	1½″ to 1½″	3¼″ x ⅜″
C68	139	1½″ to 2″	3¼″ x 7/16″

ADJUSTABLE RING CORNER FITTINGS (GALV.)



SOCKETS

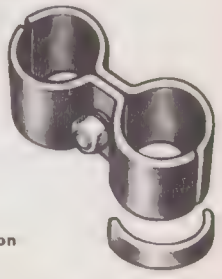
New No.	Old No.	Pipe Size
AS4	701	1″
AS5	702	1¼″
AS6	703	1½″

RINGS

New No.	Old No.	Pipe Size
AR5	705	1¼″
AR6	706	1½″
AR8	707	2″

Rings are supplied complete with Unbrako Grub Screw

DOUBLE HINGE (GALV.)



No.	Size	Hex. Bolt & Nut
DH33	¾″ x ¾″	¾″ x 7/16″

HALF STOPS (WELD-ON)

HS3 ¾″

Used in conjunction with DH33

SLIP-ON OVAL FLANGES (GALV.)

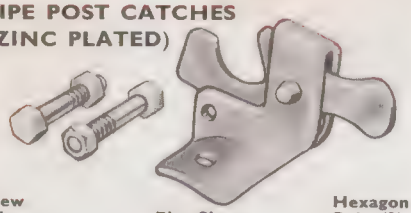
No.	Pipe Size
F4	1″
F5	1¼″
F6	1½″
F8	2″

CLAMP-ON GUDGEON PINS (GALV.)

To fit Hinges
Old No. 199, 202, 210
New No. H64, H84, H124

NOTE: NUMBERS IN BRACKETS ARE OLD REFERENCE NUMBERS.

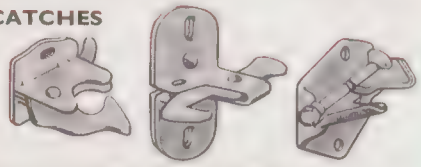
PIPE POST CATCHES (ZINC PLATED)



New No.	Pipe Sizes	Hexagon Bolts (2)
PP33 (218)	¾" Gate—¾" Post	2—1½" x 5/16"
PP34 (222)	¾" Gate—1" Post	2—1½" x 5/16"
PP35 (219)	¾" Gate—1¼" Post	2—2¼" x 5/16"
PP36 (223)	¾" Gate—1½" Post	2—2½" x 5/16"
PP44 (224)	1" Gate—1" Post	2—1½" x 5/16"
PP45 (220)	1" Gate—1¼" Post	2—2¼" x 5/16"
PP46 (221)	1" Gate—1½" Post	2—2½" x 5/16"

Post to gate clearance: 1" up to 1¼"

CATCHES



G37 (122) PARROT BEAK CATCH 1"
For holding gates back open against a post or wall

G38 (114) TWO WAY CATCH 1¼"
For 1¼" pipe frame gates.

G39 (115) TWO WAY CATCH 1"
For 1" pipe frame gates

G40 (116) TWO WAY CATCH 1"
Fitting converts catch into one way on either side

G41 (123) DOWN-EE CATCH 1"
Single catch for 1" pipe frame gates
Clearance between gate and post 1⅛"

G42 (124) DOWN-EE CATCH ¾"
Single catch for ¾" pipe frame gates

G43 (168) SQUARE DOWN-EE CATCH ⅜"
Single catch for ⅜" W.I. gates
Clearance between gate and post 1¼"

G44 (175) SQUARE DOWN-EE CATCH ¾"
SIngle catch for ¾" W.I. gates
Clearance between gate and post 1¼"

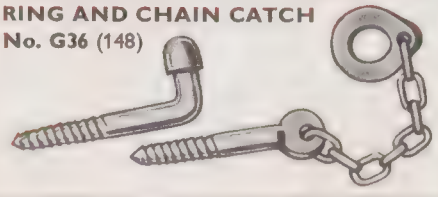
G45 (117) GATE BOW
A simple and effective catch for double gates

"D' LATCH AND STRIKERS

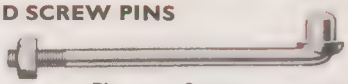
No. G49 (125) Standard type for use on pipe or square wrought iron gates. **No. G50** (196) Brisbane type for use on gates made from flat wrought iron.

RING AND CHAIN CATCH

No. G36 (148)



WOOD SCREW PINS



New No.	Pin Dia.	Screw Dia.	Length
G53 (137)	¾"	⅜"	3"
G54 (138)	1"	½"	4½"
G55 (189)	1"	¾"	12"

STRAPS AND ATTACHMENTS

STRAPS

New No.	Pipe (I.D.)	Hole Centres	Dia. of Holes	Type
G1 (126)	¾"	2⅜"	7/16"	Light
G2 (129)	1"	2⅝"	7/16"	Light
G3 (128)	1"	3"	9/16"	Heavy
G4 (130)	1¼"	4"	9/16"	Heavy

ATTACHMENTS

New No.	Pipe (I.D.)	For Strap No.	Type
G7 (131)	¾"	G1	Light
G8 (132)	1"	G2	Light
G9 (238)	1"	G3	Heavy

WELD-ON BACKPLATES

New No.	Hole Centres	For Strap No.	Type
G11 (246)	2⅜"	G2	Light
G12 (225)	3"	G3	Heavy

SPOOLS

New No.	Size	Type	For Use With
G27 (239)	⅜" x ⅜"	Standard	Strap & attachment
G28 (178)	½" x ½"	Standard	Strap & attachment
G29 (167)	⅝" x ⅝"	Standard	Strap & attachment
G30 (176)	¾" x ¾"	Standard	Strap & attachment
G32 (243)	½" x ¾"	Long	Clampon hinges
G33 (244)	¾" x 1"	Long	Clampon hinges
G34 (245)	1" x 1"	Long	Clampon hinges

TOWER BOLTS

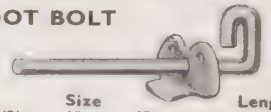
New No.	Dia.	Length	Type
G14 (145)	½"	11"	For light W.I. & pipe gates
G15 (146)	⅝"	13½"	For heavy W.I. & pipe gates
G16 (249)	⅝"	36"	For industrial gates

LUGS

New No.	Size	Type
G17 (143)	½"	For pipe gates
G18 (165/6)	½"	For wrought iron gates
G19 (144)	⅝"	For pipe gates
G20 (163/4)	⅝"	For wrought iron gates

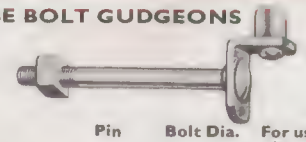
Lugs are supplied in pairs of plain and slotted

SHOOT BOLT



New No.	Size	Length
G22 (142)	½"	6" complete with guide plate

LOOSE BOLT GUDGEONS



New No.	Pin	Bolt Dia.	For use with Strap No.
G60 (190)	1"	⅝"	G3
G61 (190)	1"	½"	G3

BALUSTRADE OR FIXING LUGS

New No.	Length	Width	Slot
G74 (169)	2½"	1¼"	End
G75 (170)	4"	1½"	End
G76 (171)	4"	1½"	Side

WOOD PLATE PINS

New No.	Pin Dia.	Holes	Type
G56 (177)	¾"	5/16"	Long
G57 (197)	¾"	5/16"	Short

COMMON GUDGEONS

No	Size	Type
G68 (240)	¾"	Plain
G69 (241)	¾"	with square hole

For use with 3" Straps

BRICK GUDGEONS

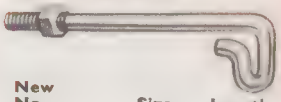
New No.	Pin Dia.	Length in Brick
G62 (134)	¾"	4½"
G63 (133)	1"	4½"

WELD-ON GUDGEONS

For use with Clamp-on Hinges or Straps and Backplates.

New No.	Pin Dia.
G65 (235)	¾"
G66 (236)	1"
G67 (237)	1¼"

BRICK BOLTS



New No.	Size	Length
G24 (140)	¾"	5½"
G25 (141)	5/16"	5½"

Hex. nuts supplied with fittings

BALUSTRADE BASES (GALV.)

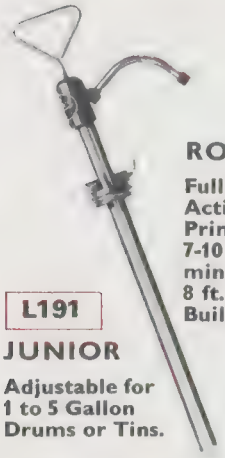
New No.	W.I. Size
G70 (195)	⅝" Sq.
G71 (172)	¾" Sq.
G72 (173)	⅞" Sq.
G73 (174)	1" Sq.

BALUSTRADE DIAMONDS AND DISCS

For covering and ornamenting cross welds on balustrading G77 Diamonds 3¾" x 1⅝". G78 Discs available all wanted sizes.

DRUM PUMPS

For dispensing Kerosene, Petrol, Oils, Disinfectant and any other liquid stored in Drums or Tins.



L191

JUNIOR

Adjustable for 1 to 5 Gallon Drums or Tins.

L192

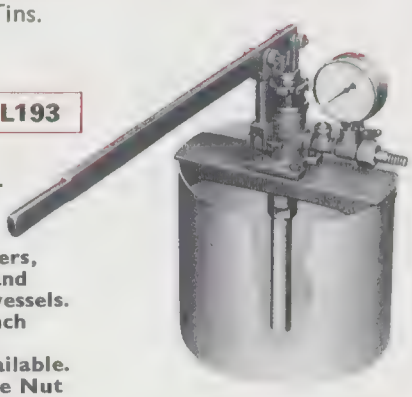
ROTOFLO

Full Rotary Action Self Priming Delivers 7-10 Gals. per min. Fitted with 8 ft. outlet hose. Built in Filter.

L193

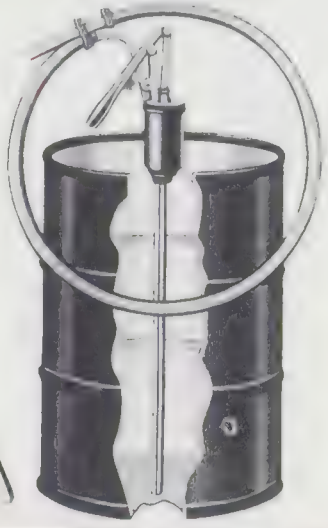
HAND TEST PUMP

For testing Boilers, Storage Tanks and other pressure vessels. 500 lb. per sq. inch gauge supplied, other gauges available. ½" B.S.P. or Hose Nut and tail connection.



MALCO PUMP

for 44 Gallon Drums



L194

RIVULET

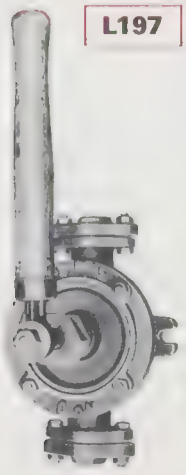
Adjustable for 12 to 44 Gallon Drums

L196

PETROL PUMP

L195

OIL PUMP



L197 SEMI ROTARY TYPES

Cast Iron Body or all Brass

Type No.	B.S.P. Connection	Capacity Gals. per minute at 120 Single Strokes/Min.
0	½	4
1	¾	6
2	1	8
3	1¼	11
4	1¼	15
5	1½	20
6	1½	25
7	2	30

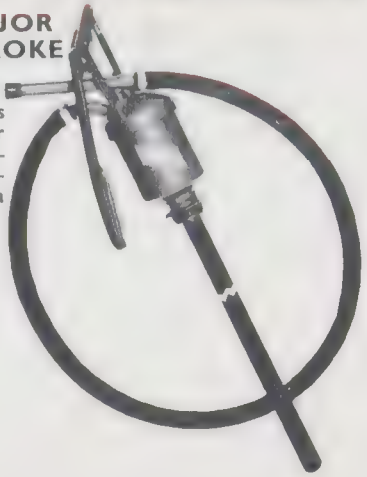
L198 MALCO MAJOR QUART-STROKE PUMPS

The MALCO MAJOR pumps fuel from tanks above, on or below ground smoothly — safely — quickly — one gallon of fuel is delivered in four strokes!

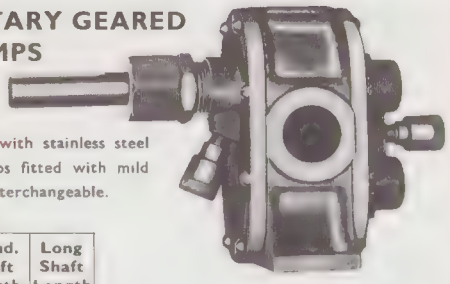
Self priming action.

Strong ferrous construction guarantees years of efficient service.

Available with either fixed length to order or telescopic tailpipes.



L199 ROTARY GEARED PUMPS



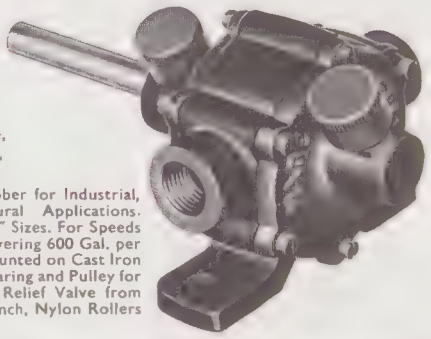
Bronze pumps fitted with stainless steel shaft. Cast iron pumps fitted with mild steel shaft. All parts interchangeable.

Pump Size	Shaft Diam.	Stand. Shaft Length	Long Shaft Length
¾"	½"	1¾"	3½"
1"	⅝"	2¼"	5½"
1¼"	⅝"	2¼"	4¾"
1½"	¾"	2½"	5¼"

600 R.P.M.

All pumps are fitted with Grease Cups and can be supplied with Inbuilt Relief Valve.

L200 ROTARY ROLLER PUMPS



Body Casting—Bronze,
Spindle—Stainless Steel,
Pumping Rollers — Oil

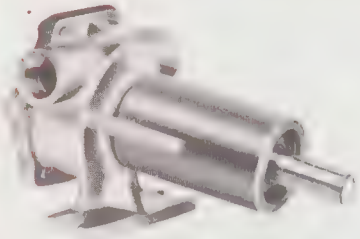
Resistant Synthetic Rubber for Industrial, Marine and Agricultural Applications. Available in ⅜", ½" and ⅝" Sizes. For Speeds up to 2,500 R.P.M., delivering 600 Gal. per hour. Also available, mounted on Cast Iron Stand with outrigger Bearing and Pulley for Belt Drive, Adjustable Relief Valve from 10 lb. to 50 lb. per sq. inch, Nylon Rollers for Special Purpose.

PARSONS FLEXI-VANE PUMPS

Self Priming, Bronze Casting
Stainless Steel Shaft
REPLACEABLE AND REVERSIBLE VANES
Wide range of Speeds.

Pump Size	Total Head		450 R.P.M.		900 R.P.M.		1440 R.P.M.		1600 R.P.M.	
	P.S.I.	Ft.H_2O	G.P.H.	HP.	G.P.H.	HP.	G.P.H.	H.P.	G.P.H.	HP.
¼" B.S.P.	0	0	38	⅛	76	⅛	130	⅛	155	⅛
	4.3	10	36	⅛	71	⅛	95	⅛	100	⅛
	8.7	20	31	⅛	66	⅛	68	⅛	72	⅛
	13.0	30	10	⅛	45	⅛	48	⅛	55	⅛
	17.3	40			23	⅛	26	⅛	41	⅛
	21.6	50								
⅜" B.S.P.	0	0	80	¼	156	¼	277	¼	300	¼
	4.3	10	75	¼	150	¼	260	¼	282	¼
	8.7	20	64	¼	144	¼	240	¼	265	¼
	13.0	30	60	¼	133	¼	225	¼	225	¼
	17.3	40	37	¼	110	¼	210	¼	175	¼
	21.6	50			65	¼	185	¼	120	¼
½" B.S.P.	0	0	180	¼	300	¼	480	½	530	½
	4.3	10	150	¼	280	¼	450	½	495	½
	8.7	20	120	¼	260	¼	425	½	468	½
	13.0	30	45	¼	165	¼	330	½	363	½
	17.3	40			110	¼	260	½	286	½
	21.6	50					180	½	198	½
¾" B.S.P.	0	0	300	¼	620	¾	980	¾	1220	¾
	4.3	10	225	¼	500	¾	900	¾	1030	¾
	8.7	20	120	¼	340	¾	700	¾	980	¾
	17.3	40	50	¼	120	¾	620	¾	810	¾
	26	60			50	¾	450	1	690	1
	34.6	80					140	1	580	1
1¼" B.S.P.	0	0	1200	½	2400	¾	3300	1½	3600	2
	4.3	10	835	¾	1920	¾	3000	1½	3120	2
	8.7	20	800	¾	1500	¾	2590	2	2820	2
	17.3	40	710	¾	900	1	1960	2	2400	2
	26	60	698	¾	600	1	1800	2	2100	2
	34.6	80	540	1	360	1	1500	2	1680	2

L201 PLAIN BRONZE BEARING



L202 BALL-BEARING MODEL

L203 GALVANISED SCREWED FOOT VALVES

SIZES:
¾" 1" 1¼" 1½"
2" 2½" 3" 4" 6"

L204 BRASS BORE TYPE FOOT VALVES

SIZES:
¾" 1" 1¼ 1½ 2"
2½" 3" 4" 6"

L205 FLANGED FULLWAY FOOT VALVES

SIZES: B.S.P.
Galvanised
2" to 18"
Brass
2" 2½" 3" 4" 5" 6" 7" 8" 9" 10" 12"

L206

VINIDEX RIGID P.V.C. IRRIGATION PIPES AND FITTINGS

Nominal Size	Class A 150 ft. Head 65 lbs./sq. in.				Class B 200 ft. Head 87 lbs./sq. in.			Class C 300 ft. Head 130 lbs./sq. in.			Class D 400 ft. Head 173 lbs./sq. in.		
	Outside Diameter	Inside Diameter	Wall Thickness	Weight lb./100	Inside Diameter	Wall Thickness	Weight lb./100′	Inside Diameter	Wall Thickness	Weight lb./100′	Inside Diameter	Wall Thickness	Weight lb./100′
½″	0.839	—	—	—	—	—	—	—	—	—	0.715	0.062	9.25
¾″	1.050	—	—	—	—	—	—	—	—	—	0.918	0.066	12.47
1″	1.318	—	—	—	—	—	—	1.172	0.073	17.45	1.154	0.082	19.46
1¼″	1.663	—	—	—	—	—	—	1.503	0.080	24.31	1.459	0.102	30.57
1½″	1.897	—	—	—	1.729	0.084	29.24	1.719	0.089	30.90	1.665	0.116	39.67
2″	2.373	—	—	—	2.185	0.094	41.13	2.151	0.111	48.21	2.085	0.144	61.63
3″	3.497	3.327	0.085	56.0	3.263	0.117	75.93	3.175	0.161	103.12	3.073	0.212	133.71
4″	4.498	4.278	0.110	93.0	4.216	0.141	117.95	4.084	0.207	170.54	3.954	0.272	220.70
6″	6.622	6.262	0.180	222.64	6.208	0.207	254.96	6.016	0.303	355.57	5.836	0.393	470.02

PIPES

Lengths: 20′ effective length.
Ends: Available with one belled end or plain ends.
Colour: Blue, indicating suitable for drinking water.

Pressure Rating: Working pressures
Allowing 4 - 1 Safety Factor
Allowing for 50 years continuous pressure life
As per *Australian Standard K138* (1963)

L207

P.V.C. FITTINGS

TAKE OFF ADAPTORS PLAIN

No 1

Nominal Pipe Size	Nominal Pipe Size
¾ x ½	1½ x 1
1 x ½	1½ x 1¼
1 x ¾	2 x ½
1¼ x ½	2 x ¾
1¼ x ¾	2 x 1
1¼ x 1	2 x 1¼
1½ x ½	2 x 1½
1½ x ¾	

TAKE OFF ADAPTORS VALVE

No. 2

Nominal Pipe Size	B.S.P. Thread	Nominal Pipe Size	B.S.P. Thread
½	½	1½	¾
¾	½	1½	1
¾	¾	1½	1¼
1	½	1½	1½
1	¾	2	½
1	1	2	¾
1¼	½	2	1
1¼	¾	2	1¼
1¼	1	2	1½
1¼	1¼	2	2
1½	½		

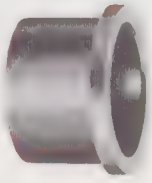
TAKE OFF ADAPTORS FAUCET

No. 3

Nominal Pipe Size	B.S.P. Thread	Nominal Pipe Size	B.S.P. Thread
½	½	1½	¾
¾	½	1½	1
¾	¾	1½	1¼
1	½	1½	1½
1	¾	2	½
1	1	2	¾
1¼	½	2	1
1¼	¾	2	1¼
1¼	1	2	1½
1¼	1¼	2	2
1½	½		

REDUCING BUSHES

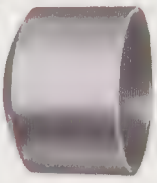
No. 5



Nominal Pipe Size
¾ x ½
1 x ¾
1¼ x 1
1½ x 1¼
2 x 1½
2 x 1
3 x 2
4 x 2
4 x 3

CAPS

No. 6



Nominal Pipe Size
½
¾
1
1¼
1½
2
3
4

COUPLINGS

No. 7

Nominal Pipe Size
½
¾
1
1¼
1½
2
3
4
6

REDUCING COUPLINGS

No. 8

Nominal Pipe Size	Nominal Pipe Size
¾ x ½	1½ x 1¼
1 x ½	2 x ½
1 x ¾	2 x ¾
1¼ x ½	2 x 1
1¼ x ¾	2 x 1¼
1¼ x 1	2 x 1½
1½ x ½	3 x 2
1½ x ¾	4 x 2
1½ x 1	4 x 3

CROSSES

No. 9

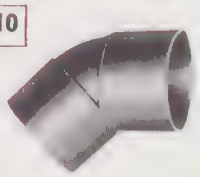
Nominal Pipe Size	Nominal Pipe Size
4—2	3—2
4—1½	3—1½
4—1¼	3—1¼
4—1	3—1
4—¾	3—¾
4—½	3—½

ALL DIMENSIONS IN INCHES

P.V.C. PIPE FITTINGS

45° ELBOWS

No. 10



Nominal Pipe Size
½
¾
1
1¼
1½
2

90° ELBOWS

No. 13

Nominal Pipe Size		Nominal Pipe Size	
½	½	1½	1
¾	½	1½	1¼
¾	¾	1½	1½
1	½	2	½
1	¾	2	¾
1	1	2	1
1¼	½	2	1¼
1¼	¾	2	1½
1¼	1	2	2
1¼	1¼	3	3
1½	½	4	4
1½	¾	6	6

Also available
90° VALVE ELBOW

No. 14

90° FAUCET ELBOW

No. 15

Nominal Pipe Size	B.S.P. Thread	Nominal Pipe Size	B.S.P. Thread
½	½	1½	¾
¾	½	1½	1
¾	¾	1½	1¼
1	½	1½	1½
1	¾	2	½
1	1	2	¾
1¼	½	2	1
1¼	¾	2	1¼
1¼	1	2	1½
1¼	1¼	2	2
1½	½		

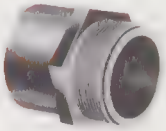
FLANGES

No. 16

Nominal Pipe Size	Flange Diameter	Flange Thickness
½	3¾	½
¾	4	½
1	4½	9/16
1¼	4¾	⅝
1½	5¼	½
2	6	⅝
3	7¼	1
4	8½	1⅛
6	11	1¼

VALVE SOCKETS

No 17



Nominal Pipe Size	B.S.P. Thread Size
½	½
¾	¾
1	1
1¼	1¼
1½	1½
2	2

FAUCET SOCKETS

No. 18

Nominal Pipe Size	B.S.P. Thread
½	½
¾	¾
1	1
1¼	1¼
1½	1½
2	2

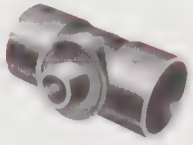
TEES

No. 19

Nominal Pipe Size		Nominal Pipe Size	
½	½	1½	1
¾	½	1½	1¼
¾	¾	1½	1½
1	½	2	½
1	¾	2	¾
1	1	2	1
1¼	½	2	1¼
1¼	¾	2	1½
1¼	1	2	2
1¼	1¼	3	3
1½	½	4	4
1½	¾	6	6

FAUCET TEES

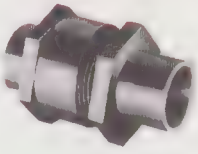
No. 21



Nominal Pipe Size	B.S.P. Thread	Nominal Pipe Size	B.S.P. Thread
½	½	1½	¾
¾	½	1½	1
¾	¾	1½	1¼
1	½	1½	1½
1	¾	2	½
1	1	2	¾
1¼	½	2	1
1¼	¾	2	1¼
1¼	1	2	1½
1¼	1¼	2	2
1½	½		

UNIONS

No. 22

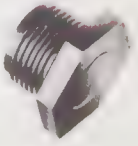


Nominal Pipe Size

½", ¾", 1", 1¼", 1½", 2"

SCREWED PLUGS

No. 23



B.S.P. Thread Size	½"	¾"	1"	1¼"
Length of Thread	⅝"	11/16"	11/16"	13/16"

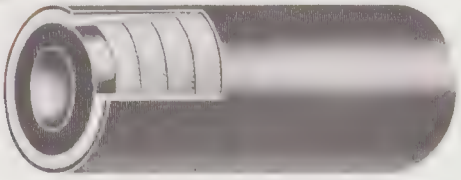
L208 RIGID P.V.C. SUBSOIL DRAINAGE PIPES

Nominal Size	Outside Diameter	Inside Diameter	Wall Thickness	Weight per 100ft.
1½"	1.897"	1.817"	.040"	13.26 lbs.
2"	2.373"	2.293"	.040"	17.92 lbs.
3"	3.497"	3.357"	.070"	46.05 lbs.
4"	4.498"	4.338"	.080"	67.86 lbs.

ALL DIMENSIONS IN INCHES

HOSES

L209 SAND AND SHOT BLAST HOSE



Extra heavy gauge. High tensile abrasion resistant stock.

Wrapped plies of heavy close-woven fabric, for high burst strength and resistance to shock blows.

For use with either sand or steel shot.

Cut lengths as required.

Inside Diameter	No. of Plies	Working Pressure Safety Factor 4 lbs. sq. in.	Nominal Outside Diameter inches
¼″	3	170	1 29/64″
¼″	4	195	1 33/64″
¼″	5	230	1 37/64″
1″	3	150	1 25/64″
*1″	4	175	1 29/64″
1″	5	200	1 33/64″
1¼″	3	135	2 7/64″
1¼″	4	160	2 11/64″
1¼″	5	185	2¼″
1½″	3	120	2 43/64″
*1½″	4	145	2 51/64″
1½″	5	170	2½″
1¾″	3	110	2 59/64″
1¾″	4	130	2 43/64″
1¾″	5	150	2¾″
2″	4	130	2 59/64″
2″	5	155	2 43/64″
2¼″	4	115	3 3/16″
2¼″	5	130	3¼″
2½″	4	115	3 27/64″
2½″	5	130	3½″
2¾″	4	110	3 43/64″
2¾″	5	115	3¾″
3″	4	100	3 59/64″
3″	5	115	3 43/64″

* Popular sizes. **MANUFACTURED IN 60 FT. LENGTHS**

L214 POLYTHENE PIPING

Medium Pressure

NORMAL GAUGE

Nominal Bore	Weight per 100 ft. in. lbs.	Max. Safe Pressure at lbs. per sq. in.	Working at 70° F Feet Head	Length of Coils
½″	7	135	320	600′
¾″	14	100	230	600′
1″	17½	80	190	600′
1¼″	21½	65	150	500′
1½″	28	65	150	400′
2″	51½	65	150	300′

MEDIUM GAUGE

Nominal Bore	Weight per 100 ft. in. lbs.	Max. Safe Pressure at lbs. per sq. in.	Working at 70° F Feet Head	Length of Coils
3″	102	50	115	20′
4″	137	37	85	20′
5″	170	30	70	20′
6″	200	25	60	20′

L210 NUFLO NYLON TUBING

Outside Diameter	Inside Diameter	Working Pressure	Minimum Radii Bend
		Lbs. per sq. inch.	
⅛″	.096″	1000 P.S.I.	1″
5/32″	.094″	1000 P.S.I.	1½″
3/16″	.138″	1000 P.S.I.	2″
¼″	.190″	1000 P.S.I.	3″
5/16″	.242″	1000 P.S.I.	4″
⅜″	.295″	1000 P.S.I.	5″
½″	.380″	1000 P.S.I.	6″
⅝″	.500″	950 P.S.I.	6½″
¾″	.625″	825 P.S.I.	10″
⅛″	.078″	2500 P.S.I.	¾″
3/16″	.110″	2500 P.S.I.	1½″
¼″	.105″	2500 P.S.I.	2½″
5/16″	.188″	2500 P.S.I.	3″
⅜″	.225″	2500 P.S.I.	3¾″
½″	.290″	2500 P.S.I.	5″

L211 BRAID REINFORCED P.V.C. PRESSURE TUBING — NON TOXIC

Suitable for Petrol, Oil, Water Gas, Air.

Use O clips or Band clips

BLACK OR CLEAR

Inside Diameter	Outside Diameter	Approximate Length of Coil	Working Pressure Lbs. per sq. inch
3/16″	.40″	500′	200
¼″	.50″	500′	200
5/16″	.565″	500′	150
⅜″	.635″	500′	150
½″	.850″	300′	150
¾″	1.125″	100′	100
1″	1.375″	100′	100
1¼″	1.75″	100′	100

Recommended Working Temperature Range
Minus 20°C. — Plus 70°C.

L212 PLASTIC GARDEN HOSE

Red or Green

Lengths cut as required.

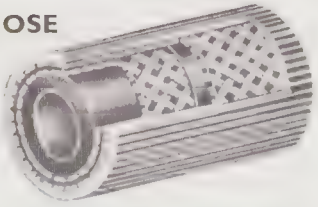
Inside Diameter	Length of Coil
½″	60 feet
½″	100 feet
½″	300 feet
¾″	60 feet
¾″	300 feet
1″	60 feet
1″	240 feet

L213 P.V.C. TUBING — PETROL RESISTANT NON TOXIC-CLEAR

Inside Diameter	Outside Diameter	Inside Diameter	Outside Diameter
⅛″	¼″	½″	11/16″
⅛″	⅜″	½″	⅝″
3/16″	9/32″	⅝″	¾″
3/16″	5/16″	⅝″	13/16″
3/16″	7/16″	¾″	1⅛″
¼″	⅜″	1″	1″
5/16″	7/16″	1″	1¼″
5/16″	½″	1¼″	1⅜″
5/16″	9/16″	1½″	1¼″
⅜″	½″	4 MM	7 MM
⅜″	9/16″	6 MM	10 MM
7/16″	⅝″	8 MM	12½ MM
½″	⅝″	10 MM	15 MM

HOSE

L215 WELDING HOSE



Braided construction

Red for Fuelgas Black for Oxygen.

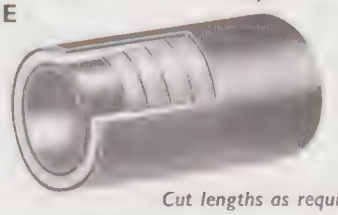
CONTINUOUS LENGTHS UP TO 375 FEET.

Cut to lengths as required.

Inside Diameter	No. of Braids	Working Pressure Safety Factor 4 lbs. sq. in.	Nominal Outside Diameter inches
*3/16"	1	250	7/16"
*1/4"	1	225	1/2"
5/16"	1	210	21/32"
3/8"	1	185	49/64"
1/4"	2	300	37/64"
*5/16"	2	265	21/32"
*3/8"	2	250	49/64"

* Popular sizes.

L216 AIR HOSE



MANUFACTURED IN 60 FEET LENGTHS

Cut lengths as required

Inside Diameter	No. of Plies	Working Pressure Safety Factor 4 lbs. sq. in.	Nominal Outside Diameter inches
*1/2"	3	180	1 1/32"
*1/2"	4	216	1 1/32"
*1/2"	5	235	1 5/32"
1/2"	6	250	1 13/64"
1/2"	7	255	1 17/64"
*3/4"	3	140	1 9/32"
*3/4"	4	165	1 11/32"
*3/4"	5	200	1 23/64"
3/4"	6	220	1 27/64"
3/4"	7	235	1 31/64"
1"	4	140	1 13/32"
*1"	5	165	1 41/64"
1"	6	185	1 45/64"
1"	7	210	1 49/64"
1 1/4"	5	140	1 57/64"
1 1/4"	6	165	1 61/64"
1 1/4"	7	185	2 1/64"
1 1/2"	5	125	2 5/32"
1 1/2"	6	145	2 1/32"
1 1/2"	7	155	2 13/64"
2"	5	105	2 3/4"
2"	6	115	2 25/64"
2"	7	125	2 31/64"

* Popular sizes.

L217 FULFLO WATER SUCTION HOSE

Wrapped Ply construction.

For heavy duty water suction service in mines, road, dam and bridge constructions and where hose may be under pressure even though on suction side of pump.

Inside diameter	Plies	Maximum working pressure lbs. sq. in.	Outside diameter over soft straight ends	Length of soft straight or enlarged ends
1"	3	115	1 21/32"	3"
1"	4	120	1 23/32"	3"
1"	5	125	1 25/32"	3"
1"	6	125	1 33/64"	3"
*1 1/4"	3	110	1 49/64"	3"
1 1/4"	4	115	1 31/32"	3"
1 1/4"	5	120	2 1/32"	3"
1 1/4"	6	120	2 5/64"	3"
*1 1/2"	3	105	2 5/32"	3"
1 1/2"	4	110	2 7/32"	3"
1 1/2"	5	115	2 9/32"	3"
1 1/2"	6	120	2 21/64"	3"
1 1/2"	3	100	2 13/32"	3"
1 1/2"	4	105	2 15/32"	3"
1 1/2"	5	110	2 17/32"	3"
1 1/2"	6	115	2 37/64"	3"
*2"	3	100	2 11/16"	3"
2"	4	125	2 3/4"	3"
2"	5	135	2 13/16"	3"
2"	6	145	2 33/64"	3"
2 1/2"	3	100	2 15/16"	3"
2 1/2"	4	110	3"	3"
2 1/2"	5	120	3 1/16"	3"
2 1/2"	6	130	3 7/64"	3"
*2 1/2"	3	90	3 1/16"	3 1/2"
*2 1/2"	4	100	3 1/4"	3 1/2"
2 1/2"	5	110	3 5/16"	3 1/2"
2 1/2"	6	120	3 23/64"	3 1/2"
3"	3	90	3 3/4"	3 1/2"
*3"	4	100	3 33/64"	3 1/2"
3"	5	110	3 37/64"	3 1/2"
3"	6	120	4"	3 1/2"
3 1/2"	3	80	4 1/4"	3 1/2"
3 1/2"	4	100	4 21/64"	3 1/2"
3 1/2"	5	110	4 13/32"	3 1/2"
3 1/2"	6	120	4 31/64"	3 1/2"
*4"	4	100	4 33/64"	4"
4"	5	110	4 37/64"	4"
4"	6	120	4 49/64"	4"
4 1/2"	4	90	5 21/64"	4"
4 1/2"	5	100	5 13/32"	4"
4 1/2"	6	110	5 31/64"	4"
5"	4	75	5 33/64"	4"
5"	5	85	5 29/32"	4"
5"	6	95	5 61/64"	4"
6"	4	50	6 1/64"	5"
6"	5	60	6 29/32"	5"
6"	6	70	6 61/64"	5"
8"	6	50	8 3/64"	5"

* Popular sizes.

Outside diameters at ends are increased when nipples are built into hose.

Note: All sizes designed for suction of any degree.

L218 HELIFLEX

WATER SUCTION and DISCHARGE HOSE

Compounded from two Compatible Types of P.V.C.

SIZE RANGE AND PRESSURE

Wall thickness gives pressure performance to B.S.1102 Table D. Vacuum test up to 26" Mercury Scale.

**All data relating to sizes marked thus, provisional.*

Code	Bore ins.	O.D. ins.	Weight lbs./100 ft.	Pressure P.S.I. Working	Pressure P.S.I. Burst	Min. Bending Radius ins.	Standard Coil Lengths ft.	Straight Lengths ft.
2E.4591	1/4	1.6	44	100	390	8	100 or 300	10 upwards
2E.4592	1/2	1.9	62	100	400	9	100 or 300	10 upwards
2E.4593	2	2.4	77	75	300	11	100 or 300	10 upwards
2E.4594	*2 1/2	3	131	75	300	12	100 or 300	10 upwards
2E.4595	3	3.5	148	65	250	14	100 or 300	10 to 30
2E.4596	*3 1/2	4	174	65	250	15	100	10 to 30
2E.4597	4	4.6	228	60	230	16	100	10 to 30
2E.4598	*4 1/2	5.1	260	50	180	20	100	10 to 30
2E.4599	*5	5.6	320	50	165	25	50 or 100	5 to 30
233.846	*6	6.6	440	50	200	39	50 or 100	5 to 30
233.850	*8	8.6	650	—	—	—	20	10

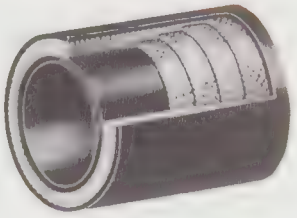
HOSES

L219 WATER DELIVERY HOSE

Wrapped construction

MANUFACTURED IN 60 FEET LENGTHS

Cut lengths as required



For light water delivery service where pressure is not high and hose does not get severe usage.

Inside Diameter	No. of Plies	Working Pressure Safety Factor 4 lbs. sq. in.	Outside Diameter
*¼"	3	170	⅝"
*¼"	4	200	1 1/16"
*¼"	5	225	1 3/16"
*⅜"	3	130	1 13/32"
*⅜"	4	160	1 7/16"
*⅜"	5	185	1 23/32"
*1"	3	110	1 21/32"
*1"	4	135	1 7/8"
*1"	5	160	1 31/32"
*1¼"	3	100	1 47/64"
*1¼"	4	120	1 15/16"
*1¼"	5	140	2 7/64"
*1½"	3	80	1 63/64"
*1½"	4	105	2 1/16"
*1½"	5	120	2 3/16"
1½"	6	145	2 7/32"
1¾"	3	70	2 1/32"
1¾"	4	90	2 1/16"
1¾"	5	110	2 3/16"
1¾"	6	130	2 1/8"
*2"	3	65	2 11/32"
*2"	4	80	2 7/16"
*2"	5	95	2 11/16"
2"	6	120	2 13/16"
2¼"	3	60	2 13/16"
2¼"	4	75	2 15/16"
2¼"	5	90	3 3/32"
2¼"	6	105	3 5/32"
*2½	3	60	3 3/32"
*2½"	4	75	3 1/16"
*2½"	5	85	3 1/8"
2½"	6	100	3 7/32"
2¾"	4	65	3 5/16"
2¾"	5	75	3 3/8"
2¾"	6	95	3 13/32"
*3"	4	60	3 7/16"
3"	5	70	3 11/16"
3"	6	80	3 13/16"
3½"	4	50	4 1/16"
3½"	5	60	4 1/4"
3½"	6	70	4 7/32"
4"	4	45	4 1/16"
4"	5	55	4 11/16"
4"	6	65	4 13/16"
4½"	4	40	5 1/16"
4½"	5	50	5 1/4"
4½"	6	65	5 7/32"
5"	5	45	5 11/16"
5"	6	55	5 13/16"
6"	5	45	6 11/16"
6"	6	50	6 13/16"

* Popular sizes.

L220 STEAM HOSE

Wrapped construction

MANUFACTURED IN 60 FEET LENGTHS

Cut to length as required

For hot water and general steam service where the saturated steam pressure does not exceed 60 lbs. per square inch, or where the temperature of superheated steam does not exceed 307° F., as measured at inlet end of hose. Suitability to be checked against "Service Class" Table.

Note 1: In service classification hose can be used for all classes under number specified, but not for higher classes. For example, 1" x 5 Ply is recommended for classes 1 to 6 inclusive, but not for classes 7 and 8.

Note 2: Class 1 is hot water service. Use safety factor of 7 against listed bursting strength to determine maximum working pressure.

Inside Diameter	No. of Plies	Recommended Highest Service Class (See Note 1)	Average bursting strength lbs. sq. in.	Nominal Outside Diameter inches
*½"	4	8	1205	1⅛"
*½"	5	8	1345	1 1/32"
½"	6	8	1425	1 9/32"
*¾"	4	6	965	1⅛"
*¾"	5	7	1115	1 1/32"
¾"	6	8	1240	1 13/32"
¾"	7	8	1315	1 1/32"
¾"	8	8	1365	1 1/32"
*1"	4	5	800	1⅛"
*1"	5	6	940	1 1/32"
1"	6	7	1055	1 1/32"
1¼"	4	4	685	1⅛"
1¼"	5	5	810	1 1/32"
1¼"	6	6	925	2 1/32"
1½"	4	4	595	2 1/16"
1½"	5	4	700	2 1/16"
1½"	6	5	815	2 3/32"
1¾"	4	3	530	2⅛"
1¾"	5	4	635	2 1/32"
1¾"	6	4	730	2 1/32"
2"	5	3	570	2 1/32"
2"	6	4	660	2 1/32"
2¼"	5	3	520	2 1/32"
2¼"	6	4	610	3 1/32"
2½"	5	3	480	3 1/16"
2½"	6	4	550	3 9/32"

* Popular sizes.

SERVICE CLASSES

Service Class	Maximum Saturated Steam Press	Max. Temp. Deg. F.	Service use	Maximum Degree of Flexing	Maximum Degree of Kinking
*1	0	212	constant	severe	severe
2	20	258	constant	severe	severe
3	40	287	intermittent	moderate	slight
4	40	287	constant	severe	moderate
5	50	298	intermittent	moderate	slight
6	50	298	constant	severe	slight
7	60	307	intermittent	moderate	slight
8	60	307	constant	severe	slight

KEMBLA COPPER TUBES

For Water, Gas, Sanitation, Heating and Cooling

Kembla Copper Tubes are manufactured to A.S. B158, 159 or 160. Types tabulated below are suitable for brazed joints, brazing, capillary or compression fittings and for Kembla Jointing Techniques. They are supplied in standard or random straight lengths in the hard drawn condition or in soft coils up to 1½" external diameter; also in varying degress of hardness. Type tubes are supplied hard drawn only.

KEMBLA Copper Tubes to A. S. B158 Tables 2, 3, 4 and 5	Nominal External Diameter and Wall Thickness in. in.	Mean External Diameter Max. in.	Mean External Diameter Min. in.	Standard Wire Gauge s.w.g.	Calculated Weight per Linear Foot* lb.	Safe Internal Working Pressure lb. per sq. in.** Hard Drawn	Safe Internal Working Pressure lb. per sq. in.** Fully Annealed
TYPE 2, Specified by Water Authorities for Water Services Used for interior plumbing and underground services, steam and hot water heating systems, fuel lines, industrial process applications carrying liquids, air and gases, air conditioning, refrigeration and low pressure hydraulic lines. Used for main to meter water services and renewals.	**⅜ x .048**	**0.375**	**0.372**	**18**	**.19**	**2720**	**1790**
	½ x .048	**0.500**	**0.497**	**18**	**.26**	**2040**	**1340**
	⅝ x .048	**0.625**	**0.622**	**18**	**.34**	**1630**	**1080**
	¾ x .056	**0.750**	**0.747**	**17**	**.47**	**1580**	**1050**
	1 x .064	**1.000**	**0.997**	**16**	**.73**	**1360**	**900**
	1¼ x .064	1.250	1.247	16	.92	1090	720
	1½ x .064	1.500	1.497	16	1.12	910	600
	1¾ x .064	1.750	1.747	16	1.31	780	510
	2 x .080	2.000	1.977	14	1.87	850	560
	2½ x .080	2.500	2.494	14	2.36	680	450
	3 x .080	3.000	2.994	14	2.84	570	370
	3½ x .104	3.500	3.494	12	4.30	630	420
	4 x .104	4.000	3.994	12	4.93	550	360
	5 x .116	5.000	4.990	11	6.90	490	330
	6 x .128	6.000	5.988	10	9.15	450	300
TYPE 3, Specified by Water Authorities for Water Services Used for interior plumbing, hot and cold water, gas, steam and hot water domestic heating systems. This type also used for panel heating, plumbing vent systems, industrial and process application.	**⅜ x .036**	**0.375**	**0.372**	**20**	**.15**	**2040**	**1340**
	½ x .040	**0.500**	**0.497**	**19**	**.22**	**1700**	**1120**
	⅝ x .040	**0.625**	**0.622**	**19**	**.29**	**1360**	**900**
	¾ x .040	**0.750**	**0.747**	**19**	**.35**	**1130**	**750**
	1 x .048	**1.000**	**0.997**	**18**	**.56**	**1020**	**670**
	1¼ x .048	1.250	1.247	18	.70	810	540
	1½ x .048	1.500	1.497	18	.85	680	450
	1¾ x .048	1.750	1.747	18	.99	580	380
	2 x .064	2.000	1.997	16	1.51	680	450
	2½ x .064	2.500	2.494	16	1.90	450	360
	3 x .064	3.000	2.994	16	2.29	450	300
	3½ x .080	3.500	3.494	14	3.33	480	320
	4 x .080	4.000	3.994	14	3.82	420	280
	5 x .092	5.000	4.990	13	5.50	390	260
	6 x .104	6.000	5.988	12	7.47	370	240
TYPE 4, Specified by Water and Sewerage Authorities for D.W.V. Services For Soil, Wastes, and Vent lines. Recommended for low pressure applications. Also industrial, commercial and home drainage systems, pre-fabricated waste assemblies — new installations and renewals.	**1 x .048**	**1.000**	**0.997**	**18**	**.56**	**1020**	**670**
	1¼ x .048	**1.250**	**1.247**	**18**	**.70**	**810**	**540**
	1½ x .048	**1.500**	**1.497**	**18**	**.85**	**680**	**450**
	1¾ x .048	**1.750**	**1.747**	**18**	**.99**	**580**	**380**
	2 x .048	**2.000**	**1.997**	**18**	**1.14**	**510**	**340**
	2½ x .048	**2.500**	**2.494**	**18**	**1.43**	**410**	**270**
	3 x .064	**3.00**	**2.994**	**16**	**2.29**	**450**	**300**
	3½ x .064	**3.500**	**3.494**	**16**	**2.68**	**390**	**260**
	4 x .064	**4.000**	**3,994**	**16**	**3.07**	**340**	**220**
	5 x .064	5.000	4.990	16	3.85	270	180
	6 x .080	6.000	5.988	14	5.77	280	190
	7 x .080	7.000	6.988	14	6.74	240	160
	8 x .080	8.000	7.984	14	7.72	210	140
	9 x .104	9.000	8.980	12	11.30	240	160
TYPE 5, Specified by Water and Sewerage Authorities for Water Supply and D.W.V. Services For Water, Soil, Wastes, and Vent lines. Recommended for low pressure applications. Also industrial, commercial and home drainage systems, pre-fabricated waste assemblies— new installations and renewals.	**⅜ x .022**	**0.375**	**0.372**	**24**	**.095**	**1250**	**820**
	½ x .022	**0.500**	**0.497**	**24**	**.128**	**940**	**620**
	⅝ x .022	**0.625**	**0.622**	**24**	**.162**	**750**	**490**
	¾ x .022	**0.750**	**0.747**	**24**	**.195**	**620**	**410**
	1 x .024	**1.000**	**0.997**	**23**	**.286**	**510**	**335**
	1¼ x .028	**1.250**	**1.247**	**22**	**.417**	**480**	**315**
	1½ x .036	**1.500**	**1.497**	**20**	**.642**	**510**	**335**
	1¾ x .036	**1.750**	**1.747**	**20**	**.751**	**440**	**290**
	2 x ,036	**2.000**	**1.997**	**20**	**.861**	**380**	**250**
	2½ x .048	**2.500**	**2.494**	**18**	**1.43**	**410**	**270**
	3 x ,048	**3.000**	**2.994**	**18**	**1.73**	**340**	**225**
	3½ x .048	**3.500**	**3.494**	**18**	**2.02**	**290**	**190**
	4 x .048	**4.000**	**3.994**	**18**	**2.31**	**260**	**170**
	5 x .064	5.000	4.990	16	3.85	270	180
	6 x .064	6.000	5.998	16	4.63	230	150

Sizes in Bold Type Recommended for Domestic Applications. *Slight variations from these weights must be expected in practice

** Approximations calculated to nearest 10 lbs., using safety factor of 5.

KEMBLA COPPER TUBES

WEIGHT TABLE

Theoretical weight in lb. per linear ft. Based on a density of .323 lb. per cubic in.

S.W.G.	1	2	4	6	8	10	11	12	13
Inch O.D.	300	.276	.232	.192	.160	.128	.116	.104	.092
1/8									
3/16									
1/4									
5/16									
3/8									
7/16									
1/2						0.58		0.50	
9/16									
5/8									
11/16									
3/4						0.97		0.82	
13/16						1 07		0.90	0 80
7/8						1.17		0.98	
15/16						1 27		1.06	
1					1 64	1.36		1.14	
1 1/32									1.05
1 1/8				2.19	1 88	1 56		1.30	
1 1/4				2 48	2 13	1.75		1.45	
1 9/32								1.50	
1 3/8				2.77	2.37	1.95		1.61	
1 1/2				3 06	2 62	2 14		1.77	
1 5/8				3.36	2 86	2.34		1.93	
1 3/4				3.64	3.10	2 53		2.09	
1 7/8				3.94	3.35	2 72		2.24	
2				4.23	3.60	2.92		2.40	
2 1/8			5 36	4 52	3.84	3 11		2 56	
2 1/4			5.70	4.82	4.06	3 30		2.72	
2 5/16							3.12		
2 3/8			6.05	5.11	4.32	3.50		2.88	
2 1/2			6 42	5 37	4 57	3 68		3.02	
2 5/8			6 78	5.70	4.80	3 90		3.17	
2 3/4			7.12	5.95	5 04	4 07		3.33	
2 7/8			7.48	6.27	5.29	4.26		3.51	
2 15/16							4.00		
3		9.18	7.80	6 54	5.50	4.45		3.65	
3 1/4		10 00	8 54	7.11	5 98	4.83		3.96	
3 7/16						5.16			
3 1/2		10.86	9 25	7.71	6.51	5 23		4.30	
3 3/4		11 70	9.95	8.57	7 00	5 69		4.59	
3 15/16						5.95			
4	13.52	12.44	10.60	8.86	7.50	6 02		4 90	
4 1/4	14.45	13.40	11.30	9.44	7 93	6 45		5 23	
4 7/16						6 72			
4 1/2	15.38	14.20	11.97	10.10	8.41	6 78		5.54	
4 3/4	16.28	15.08	12.80	10.68	8.97	7.09		5 89	
5	17.22	15.90	13.47	11.24	9.39	7.55	6.90	6.10	
5 1/2	19.00	17.60	14.90	12.34	10.35	8.33		6.80	
6	20.85	19.28	16.30	13.50	11.30	9.01		7.43	
6 1/2	22.70	21.00	17.71	14.75	12.30	9.88		8.06	
7	24.50	22.62	19.10	15.92	13.33	10.60		8.74	
7 1/2	26.39	24.30	20.23	17.20	14.30	11.50		9.38	
8	28.20	25.97	21.60	18 26	15 04	12.27		9.84	
9								11.20	

S.W.G.	14	16	17	18	19	20	22	24	26	27
Inch O.D.	.080	.064	.056	.048	.040	.036	.028	.022	.018	.0164
1/8				0.045		0.038	0.033	0 028		
3/16		0.095		0.081		0.066	0.054	0.044	0.037	
1/4	0.166	0.145		0.117		0.094	0.076	0.061	0.050	
5/16	0.266	0.193		0 155		0.121	0.097	0.078	0.065	
3/8	0.290	0.240		0.192		0.150	0.118	0.094	0.078	0.072
7/16	0.350	0.290		0.230		0.175	0.140	0.111		
1/2	0.410	0.340		0.265	0.224	0.204	0.160	0.127	0.106	0.097
9/16	0.470	0.390		0.300		0.230	0.182			
5/8	0.540	0.440		0 338	0.285	0.260	0.204	0.165	0.130	
11/16	0.590	0.485		0.370		0.290	0.220	0 180		
3/4	0.650	0.535	0.473	0 410	0.347	0.314	0.246	0.194		
13/16	0.720	0.580		0 450		0.340	0.270			
7/8	0 780	0.630		0.485		0.370	0.290			
15/16	0 840	0.680		0.520		0.400	0.310			
1	0.900	0.730		0.560		0.420	0.333			
1 1/8	1.020	0.830		0.635		0 477	0.380			
1 1/4	1.150	0.930		0.705		0 534	0.420			
1 3/8	1.265	1.020		0.780		0.590	0.460			
1 1/2	1.380	1.120		0.850		0.640	0 500			
1 5/8	1.510	1.220		0 920		0.700	0 550			
1 3/4	1.630	1.310		1.000		0.750	0 590			
1 7/8	1.750	1.410		1.070		0 808	0.630			
2	1.870	1.510		1.130		0.870	0.675			
2 1/8	2.000	1.610		1.220		0 920	0.720			
2 1/4	2.120	1.710		1.280		0 966	0.760			
2 3/8	2.230	1.800		1.360		1.030	0.800			
2 1/2	2.360	1.900		1.440		1 080	0.850			
2 5/8	2.470	2.000		1.510		1 140	0.890			
2 3/4	2.590	2.090		1.590		1.180	0.093			
2 7/8	2.720	2.180		1.650		1 250	0.970			
3	2.83	2.28		1.72		1.30	1.01			
3 1/8	3.06	2.47		1.88		1.41				
3 1/2	3.30	2.66		2.02		1 52				
3 3/4	3.55	2.98		2.15		1.63				
4	3.80	3.05		2.29		1.73				
4 1/4	4.04	3.27		2.46		1.85				
4 1/2	4.24	3.46		2.59		1.96				
4 3/4	4.55	3.66		2.76		2 07				
5	4.77	3.82		2.88		2.16				
6	5.74	4.62		3.50		2.57				
7	6.75	5.42		4.02						
8	7.72	6.20		4.62						

To calculate the theoretical weight per foot of Copper Tubes not shown on this list, the following is the formula to be used:—
External Diameter in inches, minus thickness, multiplied by thickness, multiplied by 12.18.

COPPER TUBES

COPPER REFRIGERATION TUBES

Outside Diameter	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Wall Thickness S.W.G.	22	20	20	20	20	20	20
Weight per Lineal Foot	.054	.093	.12	.15	.20	.26	.31 lbs

ANNEALED COPPER TUBE

Supplied in coils 40 – 120 ft. in length.

Outside Diameter	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Wall Thickness S.W.G.	20	22	20 22	20 22	20 22	20 22	20	20

COPPER TUBE BURSTING PRESSURE

CALCULATED BY FORMULA $\frac{2 \times \text{Wall Thickness} \times \text{Tensile Strength}}{\text{Outside Diameter}}$

WHEN TENSILE STRENGTH is HARD DRAWN approximately 55,000 lbs. per sq. in.
SOFT ANNEALED approximately 32,000 lbs. per sq. in.

Safe Working Internal Pressures for Copper Tubes using a safety factor of 6

HARD DRAWN COPPER TUBES—Pressure in lbs. per sq. inch

I.S.W.G.	8	10	12	13	14	16	18	20	22	24
External Diameter Inch										
1/8"	—	—	—	—	—	—	—	5280	4110	3230
3/16"	—	—	—	—	—	—	4690	3520	2740	2150
1/4"	—	—	—	—	—	4690	3520	2640	2050	1610
5/16"	—	—	—	—	—	3750	2820	2110	1640	1280
3/8"	—	—	—	—	3910	3130	2350	1760	1360	1070
7/16"	—	—	—	—	3350	2680	2010	1510	1170	920
1/2"	—	4690	4250	—	2930	2350	1760	1340	1030	810
9/16"	—	—	3780	—	2610	2090	1560	1170	910	—
5/8"	—	—	3400	—	2350	1880	1410	1060	820	—
11/16"	—	—	3090	—	2130	1710	1280	960	750	—
3/4"	—	3130	2840	—	1950	1560	1170	880	680	—
13/16"	—	2890	2620	2080	1810	1440	1080	810	630	—
7/8"	—	2680	2430	—	1680	1340	1010	750	590	—
15/16"	—	2500	2270	—	1560	1250	940	700	550	—
1"	2930	2350	2130	—	1470	1170	880	660	510	—
1 1/32"	—	—	—	1640	1420	—	—	—	—	—

ANNEALED COPPER TUBES—Pressures in lbs. per sq. inch

I.S.W.G.	8	10	12	13	14	16	18	20	22	24
External Diameter Inch										
1/8"	—	—	—	—	—	—	4100	3070	2390	1880
5/32"	—	—	—	—	—	—	—	—	1910	—
3/16"	—	—	—	—	—	—	2730	2050	1590	1250
7/32"	—	—	—	—	—	—	—	1760	—	—
1/4"	—	—	—	—	—	2730	2050	1540	1200	940
5/16"	—	—	—	—	—	2190	1640	1230	960	750
3/8"	—	—	—	—	2280	1820	1370	1020	800	630
7/16"	—	—	—	—	1960	1560	1170	880	680	540
1/2"	—	2730	2480	—	1710	1370	1020	770	600	470
9/16"	—	—	—	—	1520	1210	910	680	530	—
5/8"	—	—	1980	—	1370	1090	820	610	480	—
11/16"	—	—	1800	—	1240	990	750	560	430	—
3/4"	—	1820	1650	—	1140	910	680	510	400	—
13/16"	—	1680	1520	1210	1050	840	630	470	370	—
7/8"	—	1560	1410	—	980	780	590	440	340	—
15/16"	—	1460	1320	—	910	730	550	410	320	—
1"	1710	1370	1240	—	850	680	510	380	300	—
1 1/32"	—	—	—	950	830	—	—	—	—	—

BRASS TUBE

SOLID DRAWN — COMMERCIAL QUALITY

Standard Sizes, weight in lbs. per foot. Random lengths 12-18 feet

Wall Thickness I.S.W.G.	1	2	4	6	8	10	12	14	16	18	20	22	24	26	
Decimal Equivalent	.300	.276	.232	.192	.160	.128	.104	.080	.064	.048	.036	.028	.022	.018	
Outside Diameter															
1/8	—	—	—	—	—	—	—	—	—	.043	.038	.031	.026	—	70 : 30 ALLOY
5/32	—	—	—	—	—	—	—	—	—	.060	.050	.042	.034	—	
3/16	—	—	—	—	—	—	—	—	.092	.078	.064	.052	.042	—	
7/32	—	—	—	—	—	—	—	—	—	—	.076	.062	—	—	
1/4	—	—	—	—	—	—	—	.16	.14	.11	.090	.072	.058	.048	
5/16	—	—	—	—	—	—	—	.22	.18	.15	.12	.092	.074	—	
3/8	—	—	—	—	—	—	—	.27	.23	.18	.14	.11	.090	—	
7/16	—	—	—	—	—	.46	.40	.33	.28	.22	.17	.13	.11	—	
1/2	—	—	—	—	—	.55	—	.39	.32	.25	.19	.15	.12	—	
9/16	—	—	—	—	—	—	—	.45	.37	.29	.22	.17	—	—	
5/8	—	—	—	—	—	—	.63	.51	.42	.32	.25	.19	—	—	
11/16	—	—	—	—	.98	—	.71	.56	.46	.36	.27	.21	—	—	
3/4	—	—	—	—	—	.92	.78	.62	.51	.39	.30	.23	—	—	
13/16	—	—	—	—	—	1.02	.85	.68	.56	.43	.33	.26	—	—	
7/8	—	—	—	—	—	1.11	.93	.74	.60	.46	.35	.28	—	—	
15/16	—	—	—	—	—	1.21	1.00	.80	.65	.50	.38	.30	—	—	
1	—	—	—	—	1.56	1.30	1.09	.85	.70	.53	.40	.32	—	—	
1 1/8	—	—	—	2.04	1.76	1.45	1.21	.95	.79	.60	.46	.36	—	—	
1 1/4	—	—	—	2.31	1.98	1.63	1.35	1.06	.88	.67	.51	.40	—	—	
1 3/8	—	—	—	2.59	2.21	1.82	1.50	1.18	.97	.74	.56	—	.35	—	
1 1/2	—	—	—	2.86	2.44	2.00	1.65	1.29	1.07	.81	.61	—	—	—	
1 5/8	—	—	—	3.13	2.67	2.18	1.80	1.41	1.16	.88	.66	—	—	—	
1 3/4	—	—	—	3.41	2.90	2.36	1.95	1.52	1.25	.95	.72	—	—	—	
1 7/8	—	—	—	3.68	3.13	2.55	2.10	1.63	1.35	1.02	.77	—	—	—	
2	—	—	—	3.96	3.35	2.73	2.24	1.75	1.44	1.09	.82	—	—	—	
2 1/8	—	—	5.01	4.23	3.58	2.91	2.39	1.86	1.53	1.16	.87	—	—	—	
2 1/4	—	—	5.34	4.50	3.81	3.09	2.54	1.98	1.62	1.23	.93	—	—	—	
2 3/8	—	—	5.67	4.78	4.04	3.28	2.69	2.09	1.72	1.30	.98	—	—	—	
2 1/2	—	—	6.00	5.05	4.27	3.46	2.84	2.20	1.81	1.37	1.03	—	—	—	
2 5/8	—	—	6.33	5.33	4.50	3.64	2.99	2.32	1.87	1.41	1.06	—	—	—	60 : 40 ALLOY
2 3/4	—	—	6.66	5.60	4.72	3.82	3.13	2.43	1.96	1.48	1.12	—	—	—	
2 7/8	—	—	6.99	5.87	4.95	4.01	3.28	2.55	2.05	1.55	1.17	—	—	—	
3	—	8.57	7.32	5.16	5.18	4.19	3.43	2.66	2.14	1.61	1.22	—	—	—	
3 1/4	—	9.36	7.98	6.69	5.64	4.55	3.73	2.89	2.33	1.75	—	—	—	—	
3 1/2	—	10.15	8.65	7.24	6.09	4.92	4.02	3.12	2.51	1.89	—	—	—	—	
3 3/4	—	10.94	9.31	7.79	6.55	5.28	4.32	3.34	2.69	2.03	—	—	—	—	
4	12.66	11.72	9.97	8.34	7.01	5.65	4.62	3.57	2.87	2.16	—	—	—	—	
4 1/4	13.52	12.51	10.63	8.88	7.46	6.02	4.91	3.80	3.06	—	—	—	—	—	
4 1/2	14.37	13.30	11.29	9.43	7.92	6.38	5.21	4.03	3.24	—	—	—	—	—	
4 3/4	15.23	14.08	11.95	9.98	8.37	6.75	5.51	4.26	—	—	—	—	—	—	
5	16.08	14.87	12.62	10.53	8.83	7.11	5.80	4.49	—	—	—	—	—	—	
5 1/2	17.79	16.45	13.94	11.62	9.74	7.84	6.40	—	—	—	—	—	—	—	
6	19.51	18.02	15.26	12.72	10.66	8.57	6.99	—	—	—	—	—	—	—	
6 1/2	21.22	19.60	16.59	13.81	11.57	9.30	7.58	—	—	—	—	—	—	—	
7	22.93	21.17	17.91	14.91	12.48	10.03	8.18	—	—	—	—	—	—	—	

BRASS CONDENSER TUBE

Alloy: Aluminium Brass 76/22/2

Lengths: 15′ 6″ 16′ 6″ 18′ 6″

Outside Diameter: 3/4″

Wall Thickness: 18 Gauge

Weight per foot: .39 lbs.

SQUARE BRASS TUBE

Size	Wall Thickness	Weight lbs. per foot
1/2	20	.248
5/8	20	.314
3/4	18	.500
1	18	.680
1 1/4	18	.840
1 1/2	16	1.360

Random Lengths

B.T.M. PRECISION STEEL TUBES

As a distributor for B.T.M. Precision Steel Tube, we carry in stock a large and comprehensive range of sizes and qualities.

COLD DRAWN SEAMLESS STEEL TUBE (C.D.S.)

This tube is drawn cold from a hot finished tube hollow. This produces a tube with good surface finish and closer dimensional tolerances than can be produced by hot processes. Applications: Hydraulic or Air Cylinders, Bushing. Size range ¼″ O.D. to 6½″ O.D. in various wall thicknesses.

COLD DRAWN WELDED STEEL TUBE (D.W.)

This tube is drawn cold from a welded tube hollow. This produces a tube with good surface finish and close dimensional tolerance. Application: Bushings. Size range ¼″ O.D. to 3¼″ O.D. in various wall thicknesses.

ELECTRIC RESISTANCE WELDED BRIGHT STEEL TUBE (E.R.W.B.)

This tube is formed and welded from strip with a bright finish. Applications: General manipulation, furniture manufacture. Size range ½″ O.D. to 3½″ O.D. in various wall thicknesses.

ELECTRIC RESISTANCE WELDED SEMI-BRIGHT STEEL TUBE (E.R.W.S./B)

This tube is formed and welded from strip and is not as high a standard as bright finish. Applications: Usually where finish is not important. Size range, ½″ O.D. up to 3½″ O.D. in various wall thicknesses.

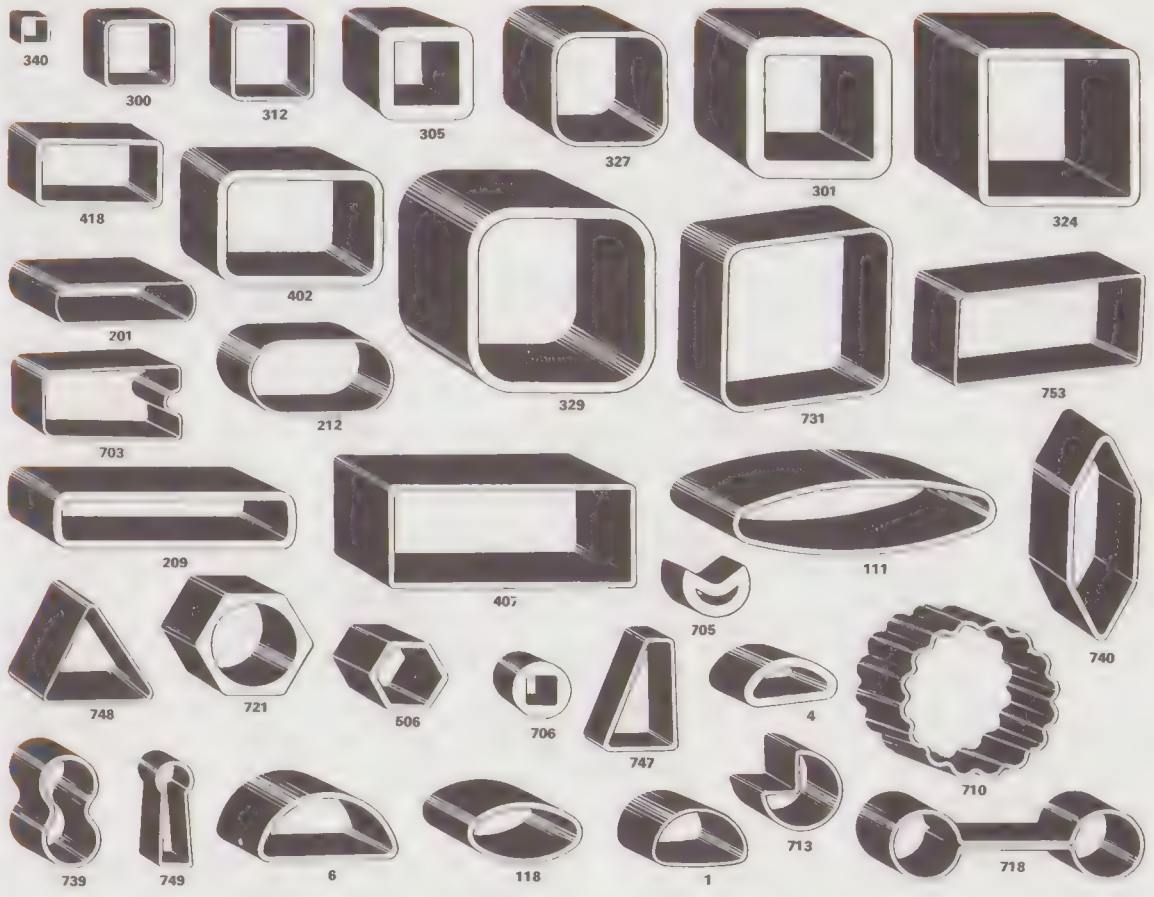
STEEL PRESSURE TUBES

A limited range of steel pressure tubes is stocked. Special dimension or specification tubes can be supplied.

ALUMINIUM TUBE

Available in seamless and welded qualities.

NON CIRCULAR SECTION TUBES



These sections are typical of the large range of non-circular section tubes available from stock. The B.T.M. standard range covers over 350 different shapes and sizes. Special sections can be supplied.

BUNDYWELD TUBE

This tube is formed from a single strip of copper-coated steel, is continuously rolled twice around laterally into a tube of uniform thickness and passed through a furnace. Copper coating fuses with steel, producing brazed double-walled Bundyweld tube.
Standard sizes:

Sizes up to $\frac{5}{8}$" O.D. are also available.

Outside Diameter Inches	Wall Thickness Inches	Inside Diameter Nominal Inches	Nominal Area Sq. Ins.	Ult. Bursting Strength of Annealed Tubing P.S.I.	Weight Ft. per lb.
$\frac{1}{8}$	.028	.069	.0085	22,900	35.3
$\frac{3}{16}$	.028	.1315	.0140	14,500	21.89
$\frac{1}{4}$	.028	.194	.0195	10,500	15.41
$\frac{1}{4}$	.032	.186	.0219	12,100	13.76
$\frac{1}{4}$	.035	.180	.0236	13,400	12.77
$\frac{5}{16}$	.028	.2565	.0250	8,200	12.05
$\frac{5}{16}$	.032	.2485	.0282	9,400	10.67
$\frac{5}{16}$	.035	.2425	.0305	10,200	9.87
$\frac{3}{8}$	.028	.319	.0305	6,700	9.86
$\frac{3}{8}$	.032	.311	.0345	7,800	8.72
$\frac{3}{8}$	.035	.305	.0374	8,500	8.05

INSIDE DIAMETER OF STEEL TUBING

When ordering Steel Tube please specify Outside Diameter and Gauge

Gauge	6	8	10	12	13	14	16	17	18	20	21	22	Gauge
Decimal Equival.	.192	.160	.128	.104	.092	.080	.064	.056	.048	.036	.032	.028	Decimal Equival.
Nearest Fract. Size Inches	$\frac{3}{16}$ = .187	$\frac{5}{32}$ = .156	$\frac{1}{8}$ = .125		$\frac{3}{32}$ = .093		$\frac{1}{16}$ = .062				$\frac{1}{32}$ = .031		Nearest Fract. Size Inches
Outside Diameter													Outside Diameter
$\frac{3}{16}$"	—	—	—	—	—	—	—	.0755	.0915	.1155	.1236	.1315	$\frac{3}{16}$"
$\frac{1}{4}$"	—	—	—	—	—	.090	.122	.138	.154	.178	.186	.194	$\frac{1}{4}$"
$\frac{5}{16}$"	—	—	—	—	—	.1525	.1845	.2005	.2165	.2405	.2485	.2565	$\frac{5}{16}$"
$\frac{3}{8}$"	—	—	—	—	—	.215	.247	.263	.279	.303	.311	.319	$\frac{3}{8}$"
$\frac{7}{16}$"	—	—	—	—	—	.2775	.3095	.3255	.3415	.3655	.3735	.3815	$\frac{7}{16}$"
$\frac{1}{2}$"	—	—	.244	.292	.316	.340	.372	.388	.404	.428	.436	.444	$\frac{1}{2}$"
$\frac{9}{16}$"	—	—	.3065	.3545	.3785	.4025	.4345	.4505	.4665	.4905	.4985	.5065	$\frac{9}{16}$"
$\frac{5}{8}$"	—	—	.369	.417	.441	.465	.497	.513	.529	.553	.561	.569	$\frac{5}{8}$"
$\frac{3}{4}$"	—	.430	.494	.542	.566	.590	.622	.638	.654	.678	.686	.694	$\frac{3}{4}$"
$\frac{7}{8}$"	—	.555	.619	.667	.691	.715	.747	.763	.779	.803	.811	.819	$\frac{7}{8}$"
1"	.616	.680	.744	.792	.816	.840	.872	.888	.904	.928	.936	.944	1"
$1\frac{1}{16}$"	.6785	.7425	.8065	.8545	.8785	.9025	.9345	.9505	.9665	.9905	.9985	1.0065	$1\frac{1}{16}$"
$1\frac{1}{8}$"	.714	.805	.869	.917	.941	.965	.997	1.013	1.029	1.053	1.061	1.069	$1\frac{1}{8}$"
$1\frac{3}{16}$"	.8035	.8675	.9315	.9795	1.0035	1.0275	1.0595	1.0755	1.0915	1.1155	1.1235	1.1315	$1\frac{3}{16}$"
$1\frac{1}{4}$"	.866	.930	.994	1.042	1.066	1.090	1.122	1.138	1.154	1.178	1.186	1.194	$1\frac{1}{4}$"
$1\frac{3}{8}$"	.991	1.055	1.119	1.167	1.191	1.215	1.247	1.263	1.279	1.303	1.311	1.319	$1\frac{3}{8}$"
$1\frac{1}{2}$"	1.116	1.180	1.244	1.292	1.316	1.340	1.372	1.388	1.404	1.428	1.436	1.444	$1\frac{1}{2}$"
$1\frac{5}{8}$"	1.241	1.305	1.369	1.417	1.441	1.465	1.497	1.513	1.529	1.553	1.561	1.569	$1\frac{5}{8}$"
$1\frac{3}{4}$"	1.366	1.430	1.494	1.542	1.566	1.590	1.622	1.638	1.654	1.678	1.686	1.694	$1\frac{3}{4}$"
$1\frac{7}{8}$"	1.491	1.555	1.619	1.667	1.691	1.715	1.747	1.763	1.779	1.803	1.811	1.819	$1\frac{7}{8}$"
2"	1.616	1.680	1.744	1.792	1.816	1.840	1.872	1.888	1.904	1.928	1.936	1.944	2"
$2\frac{1}{8}$"	1.741	1.805	1.869	1.917	1.941	1.965	1.997	2.013	2.029	2.053	2.061	2.069	$2\frac{1}{8}$"
$2\frac{1}{4}$"	1.866	1.930	1.994	2.042	2.066	2.090	2.122	2.138	2.154	2.178	2.186	2.194	$2\frac{1}{4}$"
$2\frac{3}{8}$"	1.991	2.055	2.119	2.167	2.191	2.215	2.247	2.263	2.279	2.303	2.311	2.319	$2\frac{3}{8}$"
$2\frac{1}{2}$"	2.116	2.180	2.244	2.292	2.316	2.340	2.372	2.388	2.404	2.428	2.436	2.444	$2\frac{1}{2}$"
$2\frac{3}{4}$"	2.366	2.430	2.494	2.542	2.566	2.590	2.622	2.638	2.654	2.678	2.686	2.694	$2\frac{3}{4}$"
3"	2.616	2.680	2.744	2.792	2.816	2.840	2.872	2.888	2.904	2.928	2.936	2.944	3"
$3\frac{1}{4}$"	2.866	2.930	2.994	3.042	3.066	3.090	3.122	3.138	3.154	—	—	—	$3\frac{1}{4}$"
$3\frac{1}{2}$"	3.116	3.180	3.244	3.292	3.316	3.340	3.372	3.388	3.404	—	—	—	$3\frac{1}{2}$"
$3\frac{3}{4}$"	3.366	3.430	3.494	3.542	3.566	3.590	3.622	3.638	—	—	—	—	$3\frac{3}{4}$"
4"	3.616	3.680	3.744	3.792	3.816	3.840	3.872	3.888	—	—	—	—	4"

HOLLOW BARS

Part No.	NOMINAL SIZE				Average Weight Lbs./Foot	Part No.	NOMINAL SIZE				Average Weight Lbs./Foot
	Metric		Inches				Metric		Inches		
	O.D.	I.D.	O.D.	I.D.			O.D.	I.D.	O.D.	I.D.	
1	32	20	1.26	.79	2.8	52	95	67	3.74	2.64	18.8
6		16	1.26	.63	3.4	71		50	3.74	1.97	27.0
2	36	25	1.42	.98	3.0	31	100	80	3.94	3.15	15.3
4		20	1.42	.79	4.0	53		71	3.94	2.80	21.8
3	40	28	1.57	1.10	3.7	72		56	3.94	2.20	29.5
5		25	1.57	.98	4.3	32	106	80	4.17	3.15	21.5
7		20	1.57	.79	5.2	54		71	4.17	2.80	27.0
21	45	32	1.77	1.26	4.5	73		56	4.17	2.20	34.7
43		28	1.77	1.10	5.4	33	112	90	4.41	3.54	20.2
8		20	1.77	.79	7.0	55		80	4.41	3.15	27.0
22	50	36	1.97	1.42	5.4	74		63	4.41	2.48	36.9
44		32	1.97	1.26	4.5	34	118	90	4.65	3.54	25.9
9		25	1.97	.98	8.1	56		80	4.65	3.15	32.9
23	56	40	2.20	1.57	6.8	75		63	4.65	2.48	42.7
45		36	2.20	1.42	8.0	35	125	100	4.92	3.94	25.4
10		28	2.20	1.10	10.1	57		90	4.92	3.54	33.1
24	63	50	2.48	1.96	6.7	76		71	4.92	2.80	45.6
46		40	2.48	1.57	10.3	36	132	106	5.20	4.17	28.0
65		32	2.48	1.26	12.6	58		90	5.20	3.54	40.7
25	71	56	2.80	2.20	8.6	77		71	5.20	2.80	53.2
47		45	2.80	1.77	13.1	37	140	112	5.51	4.41	31.9
66		36	2.80	1.42	16.1	59		100	5.51	3.94	42.2
26	75	60	2.95	2.36	8.4	78		80	5.51	3.15	56.9
48		50	2.95	1.97	13.0	38	150	122	5.91	4.80	31.7
67		40	2.95	1.57	16.7	60		106	5.91	4.17	49.6
27	80	63	3.15	2.48	11.0	79		84	5.91	3.30	69.1
49		50	3.15	1.97	16.9	39	160	131	6.30	5.16	37.4
68		40	3.15	1.57	20.6	61		112	6.30	4.41	57.3
28	85	67	3.35	2.64	11.4	80		95	6.30	3.74	75.3
50		55	3.35	2.17	17.4	40	170	139	6.69	5.47	42.5
69		45	3.35	1.77	21.6	62		118	6.69	4.64	65.6
29	90	71	3.54	2.80	13.8	41	180	146	7.09	5.74	45.5
51		63	3.54	2.48	18.1	63		125	7.09	4.92	73.5
70		50	3.54	1.97	24.1	42	190	155	7.48	6.10	48.5
30	95	75	3.74	2.95	14.1	64		132	7.48	5.20	81.8

API LINE PIPE—STANDARD 5L

PLAIN OR BEVEL ENDS — GRADE B

Schedule 80, Schedule 40, Seamless — Black Finish
Lengths — Single Random 18 ft. to 23 ft.
Double Random 30 ft. to 40 ft.

Nominal Bore Inches	A.S.A. Schedule No.	Outside Diameter Inches	Wall Thickness Inches	Weight Lbs. per ft.
¼"	40	1.05	.113	1.13
¼"	80	1.05	.154	1.48
1"	40	1.315	.133	1.68
1"	80	1.315	.179	2.18
1¼"	40	1.66	.140	2.27
1¼"	80	1.66	.191	3.00
1½"	40	1.9	.145	2.72
1½"	80	1.9	.200	3.64
2"	40	2.375	.154	3.65
2"	80	2.375	.218	5.02
3"	40	3.5	.216	7.58
3"	80	3.5	.300	10.25
4"	40	4.5	.237	10.79
4"	80	4.5	.337	14.98
6"	40	6.625	.280	18.97
8"	40	8.625	.322	28.55
10"	40	10.75	.365	40.48
12"	40	12.75	.375	49.56
14"	40	14.0	.375	54.57

A.P.I. American Petroleum Institute A.S.A. American Standards Association

STEEL PIPE — SCREWED AND SOCKETED — PLAIN END

MEDIUM UNGALVANISED PIPE — is self-coloured.
HEAVY GALVANISED PIPE — is distinguished by a Red band.
HEAVY UNGALVANISED PIPE — is varnished externally and distinguished by a Red band at each end.
MEDIUM GALVANISED PIPE — has no identifying colour.
AMMONIA PIPE — is distinguished by two White bands.

Nominal Bore	External Diameter	Quality	Wall Thickness (S.W.G.)	Lengths in Bundle	Bundles in Sling	Screwed and Socketed		Plain End	
						Average Length	Average Feet Per Sling	Average Length	Average Feet Per Sling
¼″	17/33″	Medium Med. Galv. Heavy Heavy. Galv. Ammonia	13 13 11 11 11	20	26	15′ 0″	7,800	14′ 11″	7,757
⅜″	11/16″	Medium Med. Galv. Heavy Heavy Galv. Ammonia	13 13 11 11 10	15	20	19′ 0″	5,700	18′ 11″	5,675
½″	27/32″	Medium Med. Galv. Heavy Heavy Galv. Ammonia	12 12 10 10 9	12	15	21′ 6″	3,870	21′ 5″	3,855
¾″	1 1/16″	Medium Med. Gal. Heavy Heavy Galv. Ammonia	12 12 10 10 8	8 8	17 16	21′ 6′	2,924	21′ 5″	2,913 2,741
1″	1 5/16″	Medium Med. Galv. Heavy Heavy Galv. Ammonia	10 10 8 8 7	6	15	21′ 6′	1,935	21′ 4″	1,920
1¼″	1 11/16″	Medium Med. Galv. Heavy Heavy Galv. Ammonia	10 10 8 8 6	4 4	17 16	21′ 6″	1,462	21′ 4″	1,451 1,365
1½″	1 23/32″	Medium Med. Galv. Heavy Heavy Galv. Ammonia	10 10 8 8 5	Sizes 1½″ and over are supplied in single lengths, except where complete slings are ordered	Lengths in Sling 62 50	21′ 6″	1,333	21′ 4″	1,323 1,066
2″	2 3/8″	Medium Med. Galv. Heavy Heavy Galv. Ammonia	9 9 7 7 5		43 40	21′ 6′	925	21′ 4″	917 853
2½″	3″	Medium Med. Galv. Heavy Heavy Galv. Ammonia	9 9 7 7 4		33 30	21′ 6″	710	21′ 4″	704 640
3″	3½″	Medium Med. Galv. Heavy Heavy Galv. Ammonia	8 8 6 6 4		24	21′ 6″	516	21′ 4″	512
3½″	4″	Medium Med. Gal. Heavy	8 8 6						
4″	4½″	Medium Med. Galv. Heavy	7 7 5						
5″	5½″	Medium Med. Galv. Heavy	6 6 5						
6″	6½″	Medium Med. Galv. Heavy	6 6 5						

NON PRESSURE STRUCTURAL TUBES

BLACK OR GALVANISED

BS 1775 Grade 13 H.F.W. (Hot Finished Welded)

Approximate Outside Dia.	Wall Thickness	Lengths Per Sling	Average feet/Sling
1 1/16″	12 S.W.G.	112	2415′
1 11/16″	12 S.W.G.	87	1870′
1 23/32″	11 S.W.G.	69	1480′
2⅜″	11 S.W.G.	54	1160′

B.T.M. STAINLESS STEEL TUBE (WELDED)

AS WELDED

As the name implies, this is tubing direct from the mill. It has a higher yield point than annealed tube and is generally used for decorative applications or in mildly corrosive conditions.

DRAWN WELDED

Cold drawn to produce tubes of intermediate sizes or to give higher tensile strength. Both "as welded" and "drawn welded" can be supplied "annealed" to improve ductility and corrosion resistance.
Tubes can be treated in acid or externally polished to remove possible surface contamination.
Polishing facilities exist to provide a full range of external finishes from a rough grit finish to a best polished finish.
A special drawn bore finish which eliminates the need for internal polishing, can be supplied.

GROUPS OF STAINLESS STEEL

(1) Iron chromium, nickel alloys (Austenitic Stainless Steels). Non magnetic and hardened only by cold working. The true stainless steel.
(2) Iron chromium alloys (Ferritic Stainless Steel). Hardened by cold working and are magnetic.
(3) Iron chromium alloys (Martensitic). Hardened by heat treatment and are magnetic.

Any type in Group (1) and selected types from Group (2) can be produced. Group (3) are only weldable with very special techniques.

NOMINAL CHEMICAL COMPOSITION

The materials which have been used to produce tube at B.T.M. are listed below:

AUSTENITIC STAINLESS STEEL

Material		C. % Max.	Ni. %	Cr. %	Mo. %	Ti. %	Cb. %	Cu. %
Type	301	0.15	6–8	16–18	—	—	—	—
	302	0 2	8–10	17–19	—	—	—	—
	304	0 08	8–10	18–20	—	—	—	—
	304L	0.03	8–12	18–20	—	—	—	—
	316	0 08	11–14	16–18	2–3	—	—	—
	316L	0 03	10–14	16–18	2–3	—	—	—
	321	0 07	9–13	17–20	—	5 x C	—	—
	347	0 08	9–13	17–20	—	—	10 x C	

HEAT RESISTING

Type	310	0.15	19–22	24–26	—	—	—	—
	330	0.1	30–34	19–21	—	—	—	—
Incoloy		0.1	30–34	19–22	—	—	—	—
Inconel		0 15	72 min.	14–17	—	—	—	—

FERRITIC

Type	430	0.12	—	14–18				

MISCELLANEOUS

Monel	0 3	63 min.	—	—	—	—	28–34
Ferry Metal	—	45	—	—	—	—	55
Pure Nickel	—	100	—	—	—	—	
Titanium	—	—	—	—	100	—	—

The A.I.S.I. type numbers as used in this table are used by the ASTM, ASME, B.S.I. and Australian Manufacturers of Stainless Steel Strip.

BOILER AND PRESSURE TUBING

For use in high temperatures, high pressures and corrosive environment, industrial boilers, food processing, photographic industry, chemical plants.
B.T.M. can supply Welded Stainless Steel Tubing to meet the range of temperature and pressure conditions usually required by modern industry.

STANDARD PRESSURE TUBE SPECIFICATIONS

ASTM-A249: Drawn Welded Austenitic Stainless Steel for boiler, super heater and condenser tubes.
ASTM-A269: Welded and Seamless Austenitic Stainless Steel tubing for general purpose.
ASTM-A312: Welded and Seamless Austenitic Stainless Steel Pipe.
British Standard-3014: Welded Austenitic Stainless Steel Tubes.

THE BIG ADVANTAGE OF B.T.M. WELDED STAINLESS STEEL IS CLEANLINESS

As this tubing is made from highly polished cold rolled stainless steel strip, it has a bore condition that is easily cleaned and will not harbour bacteria.
In many cases, particularly in the dairying industry, use is made of tin plated brass tubing. The use of strong cleaning agents is liable to strip off the tin. Welded Stainless Steel is a far more resistant material and is thus ideal for the job.

PRODUCTION SIZE RANGE WELDED DRAWN WELDED STAINLESS STEEL TUBING AND HIGH NICKEL ALLOYS

Gauge (S.W.G.)		26/24	23/22	20	18	16	14	12	10	9
Decimal Equiv.		018" 022"	024" 028"	036"	048"	.064"	080"	104"	128"	.145"
Outside Diameter Dec. Equiv. Fract.										
.249"–.253"	¼"	DX	D	D						
.261"–.264"		X SPECIAL								
281"–.285"	9/32"	DX	D	D						
311"–.315"	5/16"	DX	DX	D						
371"–.376"	⅜"	DX	DX	DX	DX					
376"–.382"		SPECIAL		X						
.500"	½"	DX	DX	DX	DX	DX				
.625"	⅝"	DX	DX	DX	DX	DX				
750"	¾"	DX	DX	DX	DX	DX	DX	D		
.875"	⅞"	X	DX	DX	DX	DX	D	D		
1.000"	1"	X	DX	DX	DX	DX	DX	DX	DX	
1 125"	1⅛"		DX	DX	DX	DX	DX	DX	DX	
1 250"	1¼"		DX	DX	DX	DX	DX	DX	DX	
1 375"	1⅜"		DX	DX	DX	DX	DX	DX	DX	
1 500"	1½"		X	DX	DX	DX	DX	DX	DX	X
1 625"	1⅝"			DX	DX	DX	DX	DX	DX	X
1 750"	1¾"			DX	DX	DX	DX	DX	DX	X
1 875"	1⅞"			DX	DX	DX	DX	DX	DX	DX
2 000"	2"			DX	DX	DX	DX	DX	DX	X
2 125"	2⅛"			DX	DX	DX	DX	DX	DX	DX
2 250"	2¼"			D	DX	DX	DX	DX	DX	X
2 500"	2½"				X	X	X	X	X	X

LEGEND X As Formed Tubing. D Drawn Welded Tubing

NOTE Although even gauges only have been shown, "As Formed" tubing can be supplied in intermediate gauges if required. Drawn Welded Tubing can be supplied in smaller and intermediate outside diameters The full range of Nominal Bore Pipe to ASA Pipe Specifications from ¼" NB Schedule 40 up to, and including, 2" NB Schedule 10 can be supplied in the Drawn Welded condition.

Special Note: Other sizes are stocked and can be supplied.
Non-Circular Details available on application.

STAINLESS STEEL BAR

RANGE OF GRADES

The table below shows the analyses of the standard grades and lists the equivalent American and British standards. Non-standard as well as modified standard analyses can be supplied provided the quantities involved are reasonably large.

AISI	STANDARD	ANALYSIS						British En
		C	Si	Mn	Cr	Ni	Mo	
410	510	.18	.3	.4	13.5	.3	—	56B
430	522	.05	.4	.5	17.5	—	—	60
304L	552 Max.	.03	.5	1.2	18.5	9.5	—	—
304	553 Max.	.06	.5	1.2	17.5	9.0	—	58E
304	554 Max.	.08	.5	1.2	17.5	9.0	—	58E
302	555 Max.	.09	.5	1.2	17.5	9.0	—	58A
321	558 Max.	.08	.5	1.2	17.5	10	— Ti 5 x C	58C
316L	561 Max.	.03	.5	1.6	17	12.5	2.7	—
—	562 Max.	.06	.5	1.4	17	9.5	1.5	58H
316	562N Max.	.06	.5	1.4	17	11.5	2.25	58H
—	563N Max.	.10	.5	1.4	17	12	2.25 Ti 5 x C	—
316	564 Max.	.06	.5	1.6	17	12	2.75	58J
329	566 Max.	.08	.5	1.8	26.5	5.0	1.6	—
—	568 Max.	.08	.5	1.6	17	12.5	2.75 Ti 5 x C	—
—	754 Max.	.05	.5	1.4	17	14	—	—
—	764 Max.	.03	.5	1.2	16.5	18	1.75	—

SECTIONS

ROUND

Finish available—Centreless Ground, Drawn Round, Peeled, Hot Rolled Annealed and Pickled, Rough Turned. **Maximum length 19.7 feet.**

CENTRELESS GROUND

Minimum Diameter .039" **Maximum Diameter 2.56"**

Tolerance on finished size +.000"—as right →	Diameter Inches Over	Up to and including	(IT.9)
		.118"	.0008
	.118"	394"	0012
	.394"	709"	.0016
	.709"	1.181"	.0020
	1.181"	1.969"	.0024
	1.969"	2.56"	0028

The above tolerances can be equal + or —.000"
+ as listed

DRAWN ROUND

Minimum Diameter .118" **Maximum Diameter .669"**

Tolerance on finished size +.000"—as right →	Diameter Inches Over	Up to and including	(IT10)	(IT11)
		.118"	.0016"	0024"
	.118"	.236"	.0020"	0032"
	236"	.394"	.0024"	0035"
	394"	.669"	.0028"	0039"

The above tolerances can be equal + or —.000"
+ as listed

PEELED

Minimum Diameter 0.787" **Maximum Diameter 3.07"**

HOT ROLLED ANNEALED and PICKLED

Diameter up to 22.6"

ROUGH TURNED

Diameter up to 22.6"

SQUARE
HOT ROLLED ANNEALED and PICKLED

Maximum length 19.7 feet

SIZE Over	Up to and including	Tolerance on finished size Plus	Minus
0.217"	0.276"	0.016"	0.000"
0.276"	0.335"	0.016"	0.000"
0.335"	0.689"	0.016"	0.000"
0.689"	1½"	0.024"	0.000"
1½"	2"	0.032"	0.000"
2"	3"	0.350"	0.000"

HEXAGON
HOT ROLLED ANNEALED and PICKLED

Maximum length 19.7 feet

SIZES	Tolerance of finished size -.000"
.312"	—.0138"
.445"	—.0177"
.525"	—.0177"
.600"	—.0177"
.820"	—.0197"
1.01"	—.0197"
1.20"	—.0236"
1.30"	—.0236"
1.48"	—.0236"

FLATS

HOT ROLLED ANNEALED and PICKLED

Maximum Length 19.7 feet

WIDTH TOLERANCE

	Plus	Minus
Up to and including 1"	.047"	.000"
Over 1" up to and including 2"	.059"	.000"
Over 2" up to and including 3"	.078"	.000"
Over 3" up to and including 6"	.118"	.000"
Over 6" up to and including 12"	.158"	.000"

THICKNESS TOLERANCE

	Thickness—only plus Tolerance Up to ¼"	Over ¼" to ½"	Over ½" to 1"	Over 1" to 2"
Up to and including 1"	.016"	.028"	.032"	—
Over 1" up to and including 2"	.020"	.032"	.034"	.050"
Over 2" up to and including 3"	.024"	.034"	.034"	.050"
Over 3" up to and including 4"	.028"	.034"	.034"	.056"
Over 4" up to and including 5"	.030"	.034"	.039"	.059"
Over 5" up to and including 6"	.032"	.034"	.043"	.063"
Over 6" up to and including 12"	.034"	.043"	.050"	.071"

NON-FERROUS METALS — SHEETS

WEIGHT TABLE — COPPER AND BRASS SHEET

Weight per square foot

I.S.W.G. No.	Decimal of an Inch	Weight per sq. ft in lb.		I.S.W.G. No.	Decimal of an Inch	Weight per sq. ft in lb.		I.S.W.G. No.	Decimal of an Inch	Weight per sq. ft in lb.	
		Copper	Brass			Copper	Brass			Copper	Brass
7/0	.5000	23.250	22.250	11	.1160	5.394	5.162	28	.0148	.688	.658
6/0	.4640	21.570	20.648	12	.1040	4.836	4.628	29	.0136	.632	.605
5/0	.4320	20.080	19.224	13	.0920	4.278	4.094	30	.0124	.576	.551
4/0	.4000	18.600	17.800	14	.0800	3.720	3.560	31	.0116	.539	.516
3/0	.3720	17.290	16.540	15	.0720	3.348	3.204	32	.0108	.502	.480
2/0	.3480	16.180	15.486	16	.0640	2.976	2.848	33	.0100	.465	.445
0	.3240	15.060	14.418	17	.0560	2.604	2.492	34	.0092	.428	.409
1	.3000	13.950	13.350	18	.0480	2.232	2.136	35	.0084	.391	.373
2	.2760	12.834	12.282	19	.0400	1.860	1.780	36	.0076	.353	.338
3	.2520	11.718	11.214	20	.0360	1.674	1.602	37	.0068	.316	.302
4	.2320	10.788	10.324	21	.0320	1.488	1.424	38	.0060	.279	.267
5	.2120	9.858	9.434	22	.0280	1.302	1.246	39	.0052	.242	.231
6	.1920	8.928	8.544	23	.0240	1.116	1.068	40	.0048	.223	.213
7	.1760	8.184	7.832	24	.0220	1.023	.979	41	.0044	.205	.195
8	.1600	7.440	7.120	25	.0200	.930	.890				
9	.1440	6.696	6.408	26	.0180	.837	.801				
10	.1280	5.952	5.696	27	.0164	.762	.729				

Based on a density of. .322 lb per cu. in for Alloy 112 and .305 lb per cu. in for Alloy 209

SIZES AVAILABLE

Metal	Grade	Sheet Size	Thickness S.W.G.
Copper	Half Hard	6′ x 3′	26 24 22 20 18 16 14 12 10
	Half Hard	6′ x 4′	24 22 20 18 16 14
	Half Hard	8′ x 4′	20 18 16 14
	Soft Cold	6′ x 3′	24 22 20 18 16
Brass	Half Hard	6′ x 2′	30 28 26 24 22 20 18 16 14 12 10 $\frac{3}{16}$″ $\frac{1}{4}$″ $\frac{3}{8}$″
	Half Hard	6′ x 3′	24 22 20 18 16 14 12 10 $\frac{3}{16}$″ $\frac{1}{4}$″ $\frac{3}{8}$″
	Soft	6′ x 2′	26 24 22 20 18 16
Phosphor Bronze	Extra Hard	6′ x 1′	26 24 22 20 18 16
Aluminium	Half Hard	6′ x 3′	24 22 20 18 16 14 12 10
	Width of Rolls	Length	Weight per square foot in lbs.
Lead	2′ 6″, 3′ 0″, 3′ 9″, 5′ 0″, 7′ 6″	20 and 30 feet.	2 3 4 5 6 8

COPPER SHEATHING

Sheet Size	S.W.G.	26	25	24	23	22	20
48″ x 14″	Weight in ozs.	12	14	16	18	20	28

SHIM BRASS

In Rolls	Thicknesses Available									
6″ Wide		.002″	.003″	.004″	.005″	.006″				
12″ Wide							.008″	.010″	.015″	.020″
In Packets	Assorted Thicknesses									
6″ x 6″	.002″ .003″ .004″ .005″ .010″									

SHIM STEEL Width of Roll 6″

Thickness	.002″	.003″	.004″	.005″	.008″	.010″	.012″	.015″	.020″
	Cut to lengths as required above 12″								

CAST IRON SOLIDS

High Tensile Close Grained Alloy Cast Iron S. G. Iron Grade 27/12

Diameter	$\frac{7}{8}$″	1$\frac{1}{8}$″	1$\frac{3}{8}$″	1$\frac{1}{2}$″	1$\frac{3}{4}$″	1$\frac{7}{8}$″
Length	12″	12″	12″	12″	12″	12″
Diameter	2″	2$\frac{1}{4}$″	2$\frac{1}{2}$″	3$\frac{3}{4}$″	3″	
Length	12″	18″	18″	18″	18″	
Diameter	3$\frac{1}{4}$″	3$\frac{1}{2}$″	3$\frac{3}{4}$″	4″	4$\frac{1}{4}$″	4$\frac{1}{2}$″
Length	18″	18″	18″	18″	18″	18″
Diameter	4$\frac{3}{4}$″	5″	5$\frac{1}{4}$″	5$\frac{1}{2}$″	6″	
Length	18″	18″	18″	18″	18″	
Diameter	6$\frac{1}{4}$″					
Length	18″					

Also available in sizes up to 15″ diameter.

BRASS AND COPPER BARS AND SECTIONS

SIZES AND THEORETICAL WEIGHTS

BRASS ROUND, SQUARE AND HEXAGON

Approximate lengths of Bars 12 ft.

Size	Round	Square	Hexagon	Size	Round	Square	Hexagon
	Weight per foot in lbs.				Weight per foot in lbs.		
1/8"	.045	.057	.049	1 1/16"	4.94	6.29	5.43
3/32"	.070	.089	.077	1 1/8"	5.42	6.90	5.97
5/32"	.101	.128	.111	1 3/16"	5.96	7.59	6.57
7/32"	.137	.179	.151	1 1/4"	6.45	8.21	7.11
1/4"	.179	.228	.197	1 5/16"	7.04	8.96	7.76
9/32"	.228	.288	.250	1 3/8"	7.57	9.64	8.34
5/16"	.280	.357	.308	1 7/16"	8.78	11.18	9.68
11/32"	.338	.433	.373	1 1/2"	10.08	12.83	11.09
3/8"	.403	.513	.444	2"	11.47	14.60	12.64
13/32"	.473	.603	.521	2 1/8"	12.94	16.47	14.27
7/16"	.549	.699	.604	2 1/4"	14.51	18.47	16.00
15/32"	.630	.803	.694	2 3/8"	16.17	20.58	17.82
1/2"	.717	.913	.788	2 1/2"	17.92	22.81	19.74
9/16"	.910	1.15	.998	2 5/8"	19.74	25.13	21.75
5/8"	1.12	1.43	1.23	2 3/4"	21.67	27.58	23.90
11/16"	1.35	1.73	1.49	2 7/8"	23.68	30.14	26.13
3/4"	1.61	2.05	1.77	3"	25.79	32.83	28.44
13/16"	1.89	2.41	2.09	3 1/4"	30.26	38.52	33.38
7/8"	2.19	2.80	2.42	3 1/2"	35.10	44.68	38.72
15/16"	2.52	3.21	2.77	3 3/4"	40.29	51.29	44.43
1"	2.87	3.65	3.16	4"	45.86	58.38	50.56
1 1/16"	3.23	4.12	3.56	4 1/4"	51.17	65.91	57.09
1 1/8"	3.63	4.62	3.99	4 1/2"	58.02	73.87	63.98
1 3/16"	4.06	5.17	4.48	4 3/4"	64.64	82.31	71.31
1 1/4"	4.48	5.70	4.93	5"	72.10	91.80	79.50

COPPER ROUND, SQUARE

Approximate lengths of Bars 12 ft.

Size	Round	Square	Size	Round	Square
	Weight per foot in lbs.			Weight per foot in lbs.	
3/16"	.106		1 1/8"	3.83	4.87
1/4"	.189	.241	1 1/4"	4.73	6.04
5/16"	.294	.378	1 3/8"	5.72	7.27
3/8"	.424	.432	1 1/2"	6.80	8.68
7/16"	.578	.738	1 5/8"	7.99	10.16
1/2"	.755	.965	1 3/4"	9.26	11.80
5/8"	1.18	1.51	1 7/8"	10.63	13.52
3/4"	1.70	2.17	2"	12.10	15.44
7/8"	2.31	2.95	2 1/4"	15.31	
1"	3.02	3.86	2 1/2"	18.30	

BRASS WIRE GAUZE Stocked in 36" Wide Rolls

Wire Thickness S.W.G.	41	39	37	35	34	33	30	26	28	24	24	24	20	16
Mesh per Lineal Inch	100	80	60	50	40	30	24	20	16	16	12	10	8	4

LEAD DAMPCOURSE

Width of Rolls	4½" 6" 9" 12" 14" 18"
Length of Rolls	20 and 30 feet
Weight per Sq. Ft.	2, 3 and 4 lbs.

LEAD PIPE

Supplied in various sizes and wall thicknesses to suit your needs.

NON-FERROUS WIRE

Metal	S.W. Gauges Available
Soft Copper	24 22 20 18 16 14 12 10
Phosphor Bronze (Extra Hard) Spring Quality	31 30 28 26 24 22 20 18 16 15 14 13 12 11 10
Hard Brass	20 18 16 14 12 10 8
Lead (Soft)	32 28 26 24 1/32" 1/16" 1/8"

FLAT BRASS BARS

SIZES AND THEORETICAL WEIGHTS

Approximate length of bars 12 ft.

Size	Lbs. per ft.	Size	Lbs. per ft.	Size	Lbs. per ft.	Size	Lbs. per ft.	Size	Lbs. per ft.
3/8" x 1/16"	.085	7/8" x 1/16"	.200	1 1/2" x 1/16"	.342	2 1/4" x 1/16"	.515	3" x 1/16"	.687
1/8"	.171	1/8"	.399	1/8"	.684	1/8"	1.031	1/8"	1.375
3/16"	.256	3/16"	.601	3/16"	1.026	3/16"	1.547	3/16"	2.062
1/4"	.342	1/4"	.803	1/4"	1.368	1/4"	2.052	1/4"	2.736
5/16"	.430	5/16"	1.004	5/16"	1.718	5/16"	2.576	5/16"	3.437
		3/8"	1.205	3/8"	2.052	3/8"	3.094	3/8"	4.124
1/2" x 1/16"	.114	1/2"	1.607	1/2"	2.736	1/2"	4.124	1/2"	5.472
1/8"	.228	5/8"	2.008	5/8"	3.429	5/8"	5.164	5/8"	6.885
3/16"	.342	3/4"	2.410	3/4"	4.108	3/4"	6.186	3/4"	8.248
1/4"	.456								
5/16"	.570	1" x 1/16"	.228	1 3/4" x 1/16"	.400	2 1/2" x 1/16"	.573	4" x 1/16"	.918
3/8"	.684	1/8"	.456	1/8"	.798	1/8"	1.146	1/8"	1.836
		3/16"	.684	3/16"	1.203	3/16"	1.719	3/16"	2.754
5/8" x 1/16"	.143	1/4"	.912	1/4"	1.596	1/4"	2.292	1/4"	3.666
1/8"	.285	5/16"	1.145	5/16"	2.010	5/16"	2.864	5/16"	4.582
3/16"	.427	3/8"	1.368	3/8"	2.406	3/8"	3.420	3/8"	5.499
1/4"	.570	1/2"	1.824	1/2"	3.209	1/2"	4.562	1/2"	7.296
5/16"	.717	5/8"	2.280	5/8"	4.016	5/8"	5.728	5/8"	9.164
3/8"	.855	3/4"	2.736	3/4"	4.811	3/4"	6.882	3/4"	10.944
1/2"	1.140								
		1 1/4" x 1/16"	.285	2" x 1/16"	.456	2 3/4" x 1/16"	.633	5" x 1/16"	1.148
3/4" x 1/16"	.171	1/8"	.570	1/8"	.912	1/8"	1.266	1/8"	2.296
1/8"	.342	3/16"	.855	3/16"	1.368	3/16"	1.895	3/16"	3.443
3/16"	.513	1/4"	1.140	1/4"	1.824	1/4"	2.521	1/4"	4.523
1/4"	.684	5/16"	1.443	5/16"	2.291	5/16"	3.156	5/16"	5.738
5/16"	.855	3/8"	1.710	3/8"	2.736	3/8"	3.781	3/8"	6.840
3/8"	1.026	1/2"	2.281	1/2"	3.648	1/2"	5.040	1/2"	9.124
1/2"	1.368	5/8"	2.850	5/8"	4.332	5/8"	6.311	5/8"	11.840
5/8"	1.710	3/4"	3.421	3/4"	5.472	3/4"	7.561	3/4"	13.747

FLAT COPPER BARS

SIZES AND THEORETICAL WEIGHTS

Approximate length of bars 12 ft.

Size	Lbs. per ft.	Size	Lbs. per ft.	Size	Lbs. per ft.	Size	Lbs. per ft.	Size	Lbs. per ft.
1/4" x 1/16"	.0603	1/4" x 1/16"	.1809	1 1/4" x 3/16"	.904	2" x 3/8"	2.894	3" x 1/16"	.723
1/8"	.1206	1/8"	.3617	1/4"	1.206	1/2"	3.858	1/8"	1.447
3/16"	.1809	3/16"	.5426	3/8"	1.809			3/16"	2.169
		1/4"	.7234	1/2"	2.412	2 1/4" x 1/16"	.542	1/4"	2.894
3/8" x 1/16"	.0904	3/8"	1.085			1/8"	1.084	3/8"	4.341
1/8"	.1808	1/2"	1.467	1 1/2" x 1/16"	.362	3/16"	1.626	1/2"	5.788
3/16"	.2712			1/8"	.724	1/4"	2.168		
1/4"	.3616	7/8" x 1/16"	.211	3/16"	1.085	3/8"	3.252	4" x 1/16"	.964
		1/8"	.422	1/4"	1.447	1/2"	4.341	1/8"	1.928
1/2" x 1/16"	.1206	3/16"	.633	3/8"	2.170			3/16"	2.894
1/8"	.2412	1/4"	.844	1/2"	2.894	2 1/2" x 1/16"	.603	1/4"	3.856
3/16"	.3617	3/8"	1.266			1/8"	1.206	3/8"	5.788
1/4"	.4824	1/2"	1.688	1 3/4" x 1/16"	.422	3/16"	1.808	1/2"	7.717
3/8"	.7234			1/8"	.844	1/4"	2.412		
		1" x 1/16"	.241	3/16"	1.265	3/8"	3.617	6" x 1/16"	1.446
5/8" x 1/16"	.1507	1/8"	.482	1/4"	1.688	1/2"	4.824	1/8"	2.892
1/8"	.3014	3/16"	.724	3/8"	2.532			3/16"	4.334
3/16"	.4522	1/4"	.965	1/2"	3.376	2 3/4" x 1/16"	.662	1/4"	5.788
1/4"	.6028	3/8"	1.447			1/8"	1.326	3/8"	8.682
3/8"	.9044	1/2"	1.929	2" x 1/16"	.482	3/16"	1.989	1/2"	11.580
1/2"	1.206			1/8"	.965	1/4"	2.652		
		1 1/4" x 1/16"	.301	3/16"	1.447	3/8"	3.978		
		1/8"	.603	1/4"	1.929	1/2"	5.306		

SOLDER

50/50 and 60/40 Solder is stocked in 2 oz. and 8 oz. sticks

RESIN CORED SOLDER

Coils of 1 lb.

ACID CORED SOLDER

Coils of 1 lb.

ALUMINIUM SOLDER

Sticks Approx. 1/2 lb.

WIPING METAL

Sticks Approx. 1 1/2 lbs., Bags 56 lbs.

ZINC BLOCKS

Sizes available
6" Sq. by 1" thick with 7/8" centre hole
12" x 6" by 1" thick with 7/8" centre hole

TIN INGOT

Approx. Weight 11 lbs.

KEMBRONZE

CONTINUOUS CAST BUSHING AND ROD

Standard Alloy SAE660.
Composition: Copper 83%, Tin 7%, Lead 7%, Zinc 3%.
Standard Stock Length 24″.
Sizes $\frac{13}{32}$″ OD up to $2\frac{25}{32}$″ available in lengths up to 12 feet.
Sizes 3″ OD up to $3\frac{1}{2}$″ available in lengths up to 6 feet.
Other shapes or sizes may be produced if required.
Other alloys also available.
KEMBRONZE is a Metal Manufactures Ltd. Trade Name.

RODS

Order Size*	Weight, Lbs. Per Ft.	To Make	Order Size	Weight, Lbs. Per Ft.	To Make
$\frac{13}{32}$″	.50	$\frac{1}{8}$″	$1\frac{13}{32}$″	7.05	$1\frac{1}{2}$″
$\frac{17}{32}$″	.85	$\frac{1}{4}$″	$1\frac{17}{32}$″	8.15	$1\frac{5}{8}$″
$\frac{21}{32}$″	1.30	$\frac{3}{8}$″	$1\frac{21}{32}$″	9.45	$1\frac{3}{4}$″
$\frac{25}{32}$″	1.85	$\frac{1}{2}$″	$2\frac{1}{32}$″	12.50	2″
$\frac{29}{32}$″	2.50	$\frac{5}{8}$″	$2\frac{5}{32}$″	15.40	$2\frac{1}{4}$″
$1\frac{1}{32}$″	3.22	1″	$2\frac{13}{32}$″	19.25	$2\frac{1}{2}$″
$1\frac{5}{32}$″	4.03	$1\frac{1}{8}$″	$2\frac{33}{32}$″	22.80	$2\frac{3}{4}$″
$1\frac{9}{32}$″	4.95	$1\frac{1}{4}$″	$3\frac{1}{32}$″	27.75	3″
$1\frac{13}{32}$″	5.95	$1\frac{3}{8}$″			

BUSHINGS

Order Size*	Weight, Lbs/Ft.	To Make
$\frac{13}{32}$″ x $\frac{13}{32}$″	1.2	$\frac{1}{2}$″ x $\frac{1}{2}$″
$\frac{13}{32}$″ x $\frac{13}{32}$″	1.9	$\frac{5}{8}$″ x $\frac{1}{2}$″
$1\frac{1}{32}$″ x $\frac{13}{32}$″	2.6	1″ x $\frac{1}{2}$″
$1\frac{1}{32}$″ x $\frac{13}{32}$″	2.1	1″ x $\frac{3}{8}$″
$1\frac{1}{32}$″ x $\frac{13}{32}$″	1.7	1″ x $\frac{1}{4}$″
$1\frac{5}{32}$″ x $\frac{13}{32}$″	3.1	$1\frac{1}{8}$″ x $\frac{3}{8}$″
$1\frac{5}{32}$″ x $\frac{13}{32}$″	2.6	$1\frac{1}{8}$″ x $\frac{1}{2}$″
$1\frac{9}{32}$″ x $\frac{13}{32}$″	4.0	$1\frac{1}{4}$″ x $\frac{3}{8}$″
$1\frac{9}{32}$″ x $\frac{13}{32}$″	3.4	$1\frac{1}{4}$″ x $\frac{1}{2}$″
$1\frac{9}{32}$″ x $\frac{13}{32}$″	3.0	$1\frac{1}{4}$″ x $\frac{5}{8}$″
$1\frac{13}{32}$″ x $\frac{13}{32}$″	4.5	$1\frac{3}{8}$″ x $\frac{1}{2}$″
$1\frac{13}{32}$″ x $\frac{21}{32}$″	3.3	$1\frac{3}{8}$″ x 1″
$1\frac{7}{16}$″ x $\frac{13}{32}$″	4.6	$1\frac{13}{32}$″ x $\frac{1}{2}$″
$1\frac{17}{32}$″ x $\frac{33}{32}$″	5.6	$1\frac{1}{2}$″ x $\frac{1}{2}$″
$1\frac{17}{32}$″ x $\frac{21}{32}$″	5.1	$1\frac{1}{2}$″ x $\frac{5}{8}$″
$1\frac{17}{32}$″ x $\frac{25}{32}$″	4.4	$1\frac{1}{2}$″ x 1″
$1\frac{21}{32}$″ x $\frac{33}{32}$″	5.6	$1\frac{5}{8}$″ x 1″
$1\frac{11}{16}$″ x $\frac{33}{32}$″	5.7	$1\frac{33}{32}$″ x 1″
$1\frac{23}{32}$″ x $\frac{33}{32}$″	6.9	$1\frac{1}{4}$″ x 1″
$1\frac{33}{32}$″ x $1\frac{3}{16}$″	5.3	$1\frac{1}{2}$″ x $1\frac{1}{4}$″
$2\frac{1}{32}$″ x $\frac{13}{32}$″	9.9	2″ x 1″
$2\frac{1}{32}$″ x $1\frac{3}{16}$″	8.2	2″ x $1\frac{1}{4}$″
$2\frac{1}{32}$″ x $1\frac{7}{16}$″	6.2	2″ x $1\frac{1}{2}$″
$2\frac{5}{32}$″ x $1\frac{7}{16}$″	7.8	$2\frac{1}{8}$″ x $1\frac{1}{2}$″
$2\frac{5}{32}$″ x $1\frac{3}{16}$″	11.4	$2\frac{1}{4}$″ x $1\frac{1}{4}$″
$2\frac{5}{32}$″ x $1\frac{7}{16}$″	9.5	$2\frac{1}{4}$″ x $1\frac{1}{2}$″
$2\frac{9}{32}$″ x $1\frac{11}{16}$″	7.1	$2\frac{1}{4}$″ x $1\frac{3}{4}$″
$2\frac{13}{32}$″ x $1\frac{3}{16}$″	15.1	$2\frac{1}{2}$″ x $1\frac{1}{4}$″
$2\frac{13}{32}$″ x $1\frac{7}{16}$″	13.1	$2\frac{1}{2}$″ x $1\frac{1}{2}$″
$2\frac{17}{32}$″ x $1\frac{11}{16}$″	10.8	$2\frac{1}{2}$″ x $1\frac{3}{4}$″
$2\frac{33}{32}$″ x $1\frac{11}{16}$″	14.9	$2\frac{1}{2}$″ x $1\frac{3}{4}$″
$2\frac{33}{32}$″ x $1\frac{15}{16}$″	11.7	$2\frac{1}{2}$″ x 2″
3″ x $1\frac{3}{16}$″	23.3	$2\frac{1}{8}$″ x $1\frac{1}{4}$″
$3\frac{1}{16}$″ x $1\frac{7}{16}$″	21.6	3″ x $1\frac{1}{2}$″
$3\frac{1}{16}$″ x $1\frac{11}{16}$″	19.3	3″ x $1\frac{3}{4}$″
$3\frac{1}{16}$″ x $1\frac{15}{16}$″	16.5	3″ x 2″
$3\frac{1}{16}$″ x $2\frac{3}{16}$″	13.2	3″ x $2\frac{1}{4}$″
$3\frac{5}{16}$″ x $2\frac{3}{16}$″	17.7	$3\frac{1}{4}$″ x $2\frac{1}{4}$″
$3\frac{5}{16}$″ x $1\frac{3}{16}$″	33.3	$3\frac{1}{2}$″ x $1\frac{1}{4}$″
$3\frac{9}{16}$″ x $2\frac{3}{16}$″	23.3	$3\frac{1}{2}$″ x $2\frac{1}{4}$″
$3\frac{5}{16}$″ x $2\frac{7}{16}$″	19.1	$3\frac{1}{2}$″ x $2\frac{1}{2}$″
$3\frac{13}{16}$″ x $2\frac{7}{16}$″	25.0	$3\frac{3}{4}$″ x $2\frac{1}{2}$

* Clean up allowance $\frac{1}{32}$″ on diameter.

CENTRIFUGALLY CAST SOLID AND HOLLOWS

SOLIDS

$2\frac{33}{32}$″	to make	$2\frac{3}{4}$″	$4\frac{9}{16}$″	to make	$4\frac{1}{2}$″
$3\frac{5}{16}$″	,, ,,	$3\frac{1}{4}$″	$5\frac{1}{16}$″	,, ,,	5″
$3\frac{9}{16}$″	,, ,,	$3\frac{1}{2}$″	$6\frac{1}{16}$″	,, ,,	6″
$4\frac{1}{16}$″	,, ,,	4″			

HOLLOWS

$1\frac{5}{16}$″ x $\frac{7}{16}$″	to make	$1\frac{1}{8}$″ x $\frac{1}{2}$″
$1\frac{5}{16}$″ x $\frac{7}{16}$″	,, ,,	$1\frac{1}{2}$″ x $\frac{1}{2}$″
$1\frac{9}{16}$″ x $\frac{7}{16}$″	,, ,,	$1\frac{1}{2}$″ x $\frac{1}{2}$″
$1\frac{13}{16}$″ x $\frac{11}{16}$″	,, ,,	$1\frac{3}{4}$″ x $\frac{3}{4}$″
$2\frac{1}{16}$″ x $\frac{11}{16}$″	,, ,,	2″ x $\frac{3}{4}$″
$2\frac{5}{16}$″ x $\frac{13}{16}$″	,, ,,	$2\frac{1}{4}$″ x 1″
$2\frac{9}{16}$″ x $\frac{11}{16}$″	,, ,,	$2\frac{1}{2}$″ x $\frac{3}{4}$″
$2\frac{13}{16}$″ x $1\frac{5}{16}$″	,, ,,	$2\frac{3}{4}$″ x $1\frac{1}{4}$″
$3\frac{1}{16}$″ x $\frac{13}{16}$″	,, ,,	3″ x 1″
$3\frac{5}{16}$″ x $1\frac{5}{16}$″	,, ,,	$3\frac{1}{4}$″ x $1\frac{1}{4}$″
$3\frac{5}{16}$″ x $2\frac{7}{16}$″	,, ,,	$3\frac{1}{4}$″ x $2\frac{1}{2}$″
$3\frac{5}{16}$″ x $1\frac{5}{16}$″	,, ,,	$3\frac{1}{2}$″ x $1\frac{1}{4}$″
$3\frac{9}{16}$″ x $1\frac{7}{16}$″	,, ,,	$3\frac{1}{2}$″ x $1\frac{1}{2}$″
$3\frac{13}{16}$″ x $1\frac{7}{16}$″	,, ,,	$3\frac{3}{4}$″ x $1\frac{1}{2}$″
$3\frac{13}{16}$″ x $1\frac{13}{16}$″	,, ,,	$3\frac{3}{4}$″ x 2″
$4\frac{1}{16}$″ x $\frac{13}{16}$″	,, ,,	4″ x 1″
$4\frac{1}{16}$″ x $1\frac{7}{16}$″	,, ,,	4″ x $1\frac{1}{2}$″
$4\frac{1}{16}$″ x $1\frac{13}{16}$″	,, ,,	4″ x 2″
$4\frac{1}{16}$″ x $2\frac{7}{16}$″	,, ,,	4″ x $2\frac{1}{2}$″
$4\frac{1}{16}$″ x $2\frac{13}{16}$″	,, ,,	4″ x 3″
$4\frac{5}{16}$″ x $1\frac{13}{16}$″	,, ,,	$4\frac{1}{4}$″ x 2″
$4\frac{5}{16}$″ x $2\frac{7}{16}$″	,, ,,	$4\frac{1}{4}$″ x $2\frac{1}{2}$″
$4\frac{5}{16}$″ x $2\frac{13}{16}$″	,, ,,	$4\frac{1}{4}$″ x 3″
$4\frac{9}{16}$″ x $1\frac{7}{16}$″	,, ,,	$4\frac{1}{2}$″ x $1\frac{1}{2}$″
$4\frac{9}{16}$″ x $1\frac{13}{16}$″	,, ,,	$4\frac{1}{2}$″ x 2″
$4\frac{9}{16}$″ x $2\frac{7}{16}$″	,, ,,	$4\frac{1}{2}$″ x $2\frac{1}{2}$″
$4\frac{9}{16}$″ x $2\frac{13}{16}$″	,, ,,	$4\frac{1}{2}$″ x 3″
$4\frac{9}{16}$″ x $3\frac{7}{16}$″	,, ,,	$4\frac{1}{2}$″ x $3\frac{1}{2}$″
$4\frac{13}{16}$″ x $1\frac{13}{16}$″	,, ,,	$4\frac{3}{4}$″ x 2″
$4\frac{13}{16}$″ x $2\frac{7}{16}$″	,, ,,	$4\frac{3}{4}$″ x $2\frac{1}{2}$″
$4\frac{13}{16}$″ x $2\frac{13}{16}$″	,, ,,	$4\frac{3}{4}$″ x 3″
$5\frac{1}{16}$″ x $1\frac{13}{16}$″	,, ,,	5″ x 2″
$5\frac{1}{16}$″ x $2\frac{7}{16}$″	,, ,,	5″ x $2\frac{1}{2}$″
$5\frac{1}{16}$″ x $2\frac{13}{16}$″	,, ,,	5″ x 3″
$5\frac{1}{16}$″ x $3\frac{7}{16}$″	,, ,,	5″ x $3\frac{1}{2}$″
$5\frac{1}{16}$″ x $3\frac{13}{16}$″	,, ,,	5″ x 4″
$5\frac{9}{16}$″ x $2\frac{13}{16}$″	,, ,,	$5\frac{1}{2}$″ x 3″
$5\frac{9}{16}$″ x $3\frac{7}{16}$″	,, ,,	$5\frac{1}{2}$″ x $3\frac{1}{2}$″
$5\frac{9}{16}$″ x $3\frac{13}{16}$″	,, ,,	$5\frac{1}{2}$″ x 4″
$5\frac{9}{16}$″ x $4\frac{7}{16}$″	,, ,,	$5\frac{1}{2}$″ x $4\frac{1}{2}$″
$6\frac{1}{16}$″ x $1\frac{13}{16}$″	,, ,,	6″ x 2″
$6\frac{1}{16}$″ x $2\frac{13}{16}$″	,, ,,	6″ x 3″
$6\frac{1}{16}$″ x $3\frac{13}{16}$″	,, ,,	6″ x 4″
$6\frac{1}{16}$″ x $4\frac{7}{16}$″	,, ,,	6″ x $4\frac{1}{2}$″
$6\frac{1}{16}$″ x $4\frac{13}{16}$″	,, ,,	6″ x 5″
$6\frac{9}{16}$″ x $2\frac{13}{16}$″	,, ,,	$6\frac{1}{2}$″ x 3″
$6\frac{9}{16}$″ x $3\frac{13}{16}$″	,, ,,	$6\frac{1}{2}$″ x 4″
$7\frac{1}{16}$″ x $2\frac{13}{16}$″	,, ,,	7″ x 3″
$7\frac{1}{16}$″ x $3\frac{13}{16}$″	,, ,,	7″ x 4″
$7\frac{1}{16}$″ x $4\frac{13}{16}$″	,, ,,	7″ x 5″
$7\frac{9}{16}$″ x $3\frac{13}{16}$″	,, ,,	$7\frac{1}{2}$″ x 4″
$7\frac{9}{16}$″ x $4\frac{13}{16}$″	,, ,,	$7\frac{1}{2}$″ x 5″
$8\frac{1}{16}$″ x $4\frac{13}{16}$″	,, ,,	8″ x 5″

Clean up allowance $\frac{1}{16}$″ on diameter.
Special sizes available on request.

OFFICIAL N.S.W. DISTRIBUTORS OF

A. & F. BEARING METALS

The Manufacturers of A & F. Bearing Metals — Aston and Fendley Pty. Ltd., Victoria — have specialised for 35 years, in all phases of white bearing metal . . . and its application to many industries. With such a background of first-hand knowledge and experience they are well qualified to produce a grade of metal to suit any bearing in any industry.

This experience, gained over many years of specialisation, enables Aston and Fendley Pty. Ltd. to offer, with their bearing metals, all the service which you may need — by way of recommending the correct grade for your particular job, ensuring that you will be satisfied with the "long-life" bearing you will enjoy, by using A. & F. Bearing Metal.

Application	Grade Recommended
Diesel Engines, Diesel Road Transport, Heavily-loaded Motor Transport Bearings, Car Bearings, Compression Ignition Engines.	DSL
General Car Bearings and other High Speed Work, High Speed Woodworking and Bobbin Making Machines, Turbines, Locomotive Bearings.	NH
Racing Car Bearings	No. 33
Steam Engines, Locomotives, Pumps, Textile Machinery, High Speed Mining and Woodworking Machinery, Sawmills, Electrical Converters, Air Compressors, Electric Motors, Stationary Generators, Pedestal Bearings on Centrifugal Machines.	CU
Gyratory Crushers, Tube and Rolling Mills, Hot Air Fans and other applications where additional hardness is required, High Speed Grinders, Lathes, Pulverisers, Sugar Mills.	Crusher "A"
For Heavy Pressures, and Medium to High Speeds, Axle Boxes, Road Rollers, Cement Mills.	No. 2
For General Engineering Work, Jaw Type Crushers, Rail Coach Axle Boxes, Blowers, Textile, Flour and Rice Mills, Brick Making Machinery, Boot and Shoe Machines, Paper Mills, Small Fans, Winches.	GP
Cement Mills, Pumps, Small Compressors, Machine Tools. Agricultural Machinery, Windmills and some Types of General Engineering Work. Best of Low-priced Babbits, Jaw Backing-Stone Crushers, Oilwell Boring Machines.	Universal "C" Magnolia No. 3
Rope Capping, Light Applications.	3 A
Anhydrous Ammonia Machinery, Compressors Enclosed Type.	Copper Free
High Quality Metallic Packing for Stuffing Boxes.	SR
Underwater Bearings, Motor Boats-Stern Tube and "A" Brackets.	UW
For Patching Blow Holes in Bearings and Score Marks in Cylinders.	PTC

OTHER A. & F. PRODUCTS

BAKERS SOLDERING SALTS
Grades 1 & 3. For dilution with Water, and for use in Soldering Machines

"A & F" POWDER FLUX
For Tinning Steel Shells prior to Running in "A & F" Bearing Metal

TUBE BENDING
Low Melting Point Alloy

"MATRIX"
Low Melting Point Alloy

"BAKERS" SOLDERING FLUID
For Tinning bronze or brass shells prior to Running in "A & F" Bearing Metal

A. & F. BEARING METALS

CORRECT POURING TEMPERATURES
Degrees Fahrenheit

Grade		
D.S.L.	700-750	Depending on the size
N.H.	700-750	and nature of the work
C.U.	700-730	
No. 2	700-730	The Metal should be
G.P.	750-800	hot enough to run
Universal "C"	700-750	freely from the ladle
Magnolia	750-800	in thin bright stream
3	750-800	
Crusher A	800-850	
Copper Free	735	
S.R.	800	
U.W.	650-700	
No. 13	Cherry Red	
Tube Bending	200	Melting Point 160°F.
Matrix	446	Melting Point 248°F.

SPECIFIC GRAVITY AND WEIGHT
Per Cubic Inch

Grade	Specific Gravity	Weight-Pounds Per Cubic in.
D.S.L.	7.384	.264
N.H.	7.297	.264
C.U.	7.918	.286
No. 2	9.327	.337
G.P.	10.320	.373
Universal "C"	10.070	.364
Magnolia	10.501	.380
3	10.685	.386
Crusher A	7.51	.272
Copper-Free	7.694	.278
S.R.	7.364	.266
U.W.	7.348	.265
Tube Bending	9.744	.340
Matrix	9.607	.345

A. & F. LOW MELTING POINT ALLOYS

A. & F. TUBE BENDING ALLOY AND A. & F. MATRIX ALLOY

Properties	Tube-Bending	Matrix
Melting Temperature	160° Fahrenheit	No definite melting point
Range	—	Softens at 218°F.
		Melts at approx. 280°F.
		Cast at 446°F.
Weight pounds/cubic inch	.340	.345
Tensile strength pounds/square inch	5990	13,000
Elongation in 2" Slow Loading %	200	Less than 1%
Brinell Hardness number	9.2	19
Specific Heat (Solid)	.040	.045
Latent Heat Fusion BTU/LB.	12	
Coefficient of Thermal	.000022 degrees	60.130° Fahrenheit
Expansion	centigrade	.000022/degrees centigrade
		130-218 deg. zero

TUBE BENDING ALLOY is used for Tube Bending and Patterns for Pantographic Machines.

MATRIX ALLOY is used for Locating and Holding Punches and dies, Making moulds for Cold Forming Plastic Material.

BLACK STEEL SHEETS

STANDARD SIZES

	Birmingham Gauge	Weight in lbs. per sheet Width of Sheet			Sheets per half ton Width of Sheet		
		30″	36″	48″	30″	36″	48″
6 ft. Lengths	10	77.5	92.9	124.1	14	12	9
	12	61.8	73.7	98.6	18	15	12
	14	48.8	58.5	78.2	23	19	15
	16	38.7	46.5	62.0	29	24	18
	18	30.8	36.9	49.2	36	30	23
	20	24.4	29.3	39.0	46	38	29
	22	19.4	23.2	31.0	58	48	36
	24	15.4	18.4	24.6	73	61	46
	26	12.2	14.6	19.6	92	77	58
	28	9.7	11.6	15.6	116	96	72
	30	7.7	9.2	12.4	146	121	91
8 ft. Lengths	10	103.1	123.6	165.2	11	9	7
	12	81.8	98.1	131.0	14	11	9
	14	64.9	77.9	104.0	17	14	11
	16	51.5	61.8	82.6	22	18	14
	18	40.9	49.1	65.6	27	23	32
	20	32.5	38.9	52.0	34	29	22
	22	25.8	30.9	41.2	43	36	27
	24	20.5	24.5	32.8	55	46	34
	26	16.2	19.5	26.0	69	58	43
	28	12.9	15.5	20.6	87	72	55
	30	10.2	12.3	16.4	110	91	68

GALVANISED AND ZINCANNEAL FLAT SHEETS

Galvanised Steel Sheet has a coating of zinc. Zincanneal Sheet is produced by combining zinc and steel bases; at high temperature — the result being a corrosion-resistant zinc/iron alloy.

STANDARD SIZES

	Birmingham Gauge	Weights in lbs. per sheet Width of Sheet				Sheets per Ton Pack Width of Sheet			
		24″	30″	36″	48″	24″	30″	36″	48″
6 ft. Lengths	14	39.62	49.48	59.33	79.04	56	45	38	28
	16	31.68	39.56	47.44	63.20	71	57	47	35
	18	25.23	31.50	37.77	50.32	89	70	60	44
	20	20.26	25.30	30.34	40.42	110	88	74	56
	22	16.28	20.33	24.37	32.47	138	110	92	68
	24	13.06	16.30	19.55	26.04	172	138	114	86
	26	8.8	11.01	13.20	17.59	250	200	166	124
8 ft. Lengths	14	52.72	65.83	78.94	105.16	42	34	28	21
	16	42.15	52.63	63.12	84.08	53	43	35	27
	18	33.56	41.91	50.26	66.95	67	54	44	34
	20	26.96	33.66	40.37	53.78	83	66	56	42
	22	21.66	27.04	32.43	43.20	103	82	68	52
	24	17.37	21.69	26.01	34.65	128	103	86	64
	26	11.73	14.65	17.57	23.40	188	150	124	94

STEEL BARS AND SECTIONS

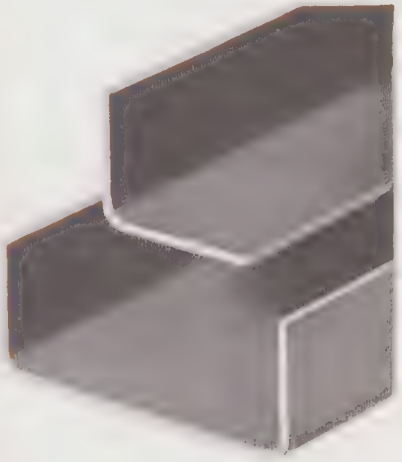
Approximate Lengths of Bars 18 ft.

SIZES AND THEORETICAL WEIGHTS

Size ins.	SQUARES Weight per ft. in lbs.	SQUARES Lineal ft. per ton	ROUNDS Weight per ft. in lbs.	ROUNDS Lineal ft. per ton	Size ins.	SQUARES Weight per ft. in lbs.	SQUARES Lineal ft. per ton	ROUNDS Weight per ft. in lbs.	ROUNDS Lineal ft. per ton
3/16	.120	18666	.094	23830	2 1/4	17.21	130	13.52	166
1/4	.212	10566	.167	13413	2 3/8	19.18	117	15.06	149
5/16	.332	6747	.261	8582	2 1/2	21.25	105	16.69	134
3/8	.478	4686	.376	5957	2 5/8	23.43	96	18.40	122
7/16	.651	3441	.511	4383	2 3/4	25.71	87	20.19	111
1/2	.850	2635	.668	3353	2 7/8	28.10	80	22.07	102
5/8	1.328	1687	1.043	2148	3	30.60	73	24.03	93
3/4	1.913	1171	1.502	1491	3 1/4	35.90	62	28.21	79
7/8	2.603	861	2.044	1096	3 1/2	41.65	54	32.71	69
1	3.400	659	2.670	839	3 3/4	47.82	47	37.55	60
1 1/8	4.303	521	3.380	663	4	54.40	41	42.73	52
1 1/4	5.313	422	4.172	537	4 1/4	61.41	36	48.24	46
1 3/8	6.428	348	5.049	443	4 1/2	68.85	33	54.07	41
1 1/2	7.650	293	6.008	373	4 3/4	76.71	29	60.25	37
1 5/8	8.978	249	7.051	318	5	85.00	26	66.76	34
1 3/4	10.41	215	8.178	274	5 1/4	93.71	24	73.60	30
1 7/8	11.95	187	9.388	239	5 1/2	102.85	22	80.78	28
2	13.60	165	10.68	210	6	122.40	18	96.13	23
2 1/8	15.35	146	12.06	186					

LYSAGHT COLD FORMED SECTIONS

Item	Catalogue No.	Size Web. Flange Gauge	Standard Lengths	Weight lbs. ft.	Lengths per Bundle
Channels	LC 75	3/4" x 1/2" x 16	16′ & 20′	0.33	20
	LC100	1" x 1/2" x 16	16′ & 20′	0.39	20
	LC150	1 1/2" x 5/8" x 16	16′ & 20′	0.56	20
	LC200	2" x 5/8" x 16	16′ & 20′	0.67	20
	LC225	2 1/4" x 1 1/8" x 12	20′	1.43	20
	LC250	2 1/2" x 1" x 12	20′	1.43	20
	LC375	3 3/4" x 1 1/2" x 10	20′	2.74	20
	LC400	4" x 1 3/8" x 10	20′	2.74	20
		Leg Lengths Gauge			
Angles	LA125	1 1/4" x 1 5/16" x 12	20′	0.68	40
	LA175	1 13/16" x 1 1/2" x 10	20′	1.33	40
	LA200	2" x 1 5/16" x 10	20′	1.33	40



LYSAGHT GRIDMESH

Standard Sheet Sizes

Finished — Black or Galvanised

Catalogue No.	Length	Widths
GR300	10′ 0"	24", 30", 36", 48"
GR400	7′ 6"	24", 30", 36", 48"
GM450	6′ 6"	24", 30", 36", 48"
GM575	10′ 6"	24", 30", 36", 48"

BRIGHT STEEL

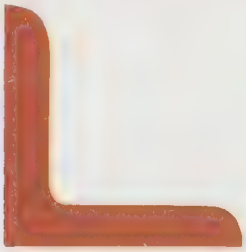
ROUNDS					HEXAGONS				SQUARES			
Size Ins.	Weight per ft. in lbs.	Lineal ft. per Ton	12′ Bars per Ton	20′ Bars per Ton	Size Ins.	Weight per ft. in lbs.	Lineal ft. per Ton	12′ Bars per Ton	Size Ins.	Weight per ft. in lbs.	Lineal ft. per Ton	12′ Bars per Ton
1/8	.042	53333	4445	2667	1/8				1/8	.053	42264	
3/16	.094	23830	1986	1192	5/32				3/16	.120	18666	
1/4	.167	13415	1118	670	3/16				1/4	.212	10566	880
5/16	.261	8582	715	429	7/32							
3/8	.376	5957	496	248	1/4	.184	12174	1014	3/8	.478	4686	390
7/16	.511	4383	365	219	5/16	.287	7812	650	7/16	.651	3441	278
1/2	.668	3363	280	168	3/8	.414	5410	450	1/2	.850	2635	219
9/16	.845	2648	221	132	7/16	.564	3972	331	9/16	1.076	2082	173
5/8	1.043	2148	179	107	1/2	.736	3043	253	5/8	1.328	1686	140
11/16	1.262	1775	148	89	9/16	.932	2430	202	11/16	1.607	1394	116
3/4	1.502	1491	124	75	5/8	1.15	1947	162	3/4	1.913	1171	98
13/16	1.763	1271	106	63	11/16	1.392	1609	134	13/16	2.245	998	83
7/8	2.044	1096	91	55	3/4	1.656	1353	113	7/8	2.603	860	71
15/16	2.347	954	80	48	13/16	1.944	1152	96				
					7/8	2.254	994	83				
1	2.670	839	70	42	15/16	2.588	866	72	1	3.40	659	55
1 1/16	3.015	743	62	37								
1 1/8	3.380	663	55	33	1	2.944	761	63	1 1/8	4.303	520	43
1 3/16	3.766	595	50	30	1 1/16	3.324	674	56				
1 1/4	4.172	537	45	27	1 1/8	3.727	601	50	1 1/4	5.313	421	35
1 5/16	4.6	487	40	24	1 3/16	4.152	539	45				
1 3/8	5.049	444	37	22	1 1/4	4.60	487	40	1 3/8	6.428	348	29
1 7/16	5.518	406	34	20	1 5/16	5.072	442	37				
1 1/2	6.008	373	31	19	1 3/8	5.567	403	34	1 1/2	7.65	293	24
1 9/16	6.519	344	29	17	1 7/16	6.084	368	31				
1 5/8	7.051	318	26	16	1 1/2	6.625	338	28				
1 3/4	8.178	274	23	14								
1 7/8	9.388	239	20	12								
					1 3/4	9.017	248	21				
2	10.68	210	18	11								
2 1/8	12.06	186	15	9								
2 1/4	13.52	166	14	8	.445	.586	3822	318				
2 1/2	16.69	134.2	11	7	.525	.811	2762	230				
2 3/4	20.19	110.9	9	6	.600	1.064	2105	175				
3	24.03	93	8	5	.710	1.48	1512	126				
3 1/4	28.21	79	6	4	.820	1.98	1131	94				
3 1/2	32.71	68	6	4	.920	2.487	901	75				
3 3/4	37.55	60	5	3	1.010	3.009	744	62				
4	42.73	52	4	3	1.100	3.568	628	52				
4 1/4	48.24	46	4	2	1.200	4.247	527	44				
4 1/2	54.07	41	3	2	1.300	4.985	449	37				
4 3/4	60.25	37	3	2	1.480	6.438	347	29				
5	66.76	33	3	1 3/4	1.670	8.212	272	22				
5 1/4	73.60	30	2 1/2	1 1/2	1.860	10.191	219	18				
5 1/2	80.78	28	2	1 1/2	2.050	12.35	181	15				
5 3/4	88.29	25	2	1 1/4	2.220	14.49	155	13				
6	96.13	23	2	1	2.413	17.47	128	11				

FLAT MILD STEEL BARS

Approximate Length of Bars 18 feet

Size	Weight per foot in lbs.	Feet per ton
½″ x ⅛″	.212	10566
3/16	.319	7022
⅝″ x ⅛″	.265	8453
3/16	.398	5628
¼	.531	4218
5/16	.665	3369
⅜	.797	2811
½	1.063	2107
¾″ x ⅛″	.319	7022
3/16	.478	4686
¼	.638	3511
5/16	.797	2811
⅜	.956	2343
½	1.275	1756
⅝	1.595	1404
⅞″ x ⅛″	.372	6022
3/16	.558	4014
¼	.744	3011
5/16	.930	2408
⅜	1.115	2009
½	1.488	1505
⅝	1.860	1204
¾	2.230	1005
1″ x ⅛″	.425	5271
3/16	.638	3511
¼	.850	2635
5/16	1.063	2107
⅜	1.275	1756
½	1.700	1318
⅝	2.125	1054
¾	2.550	878
1¼″ x ⅛″	.531	4218
3/16	.797	2811
¼	1.063	2107
5/16	1.330	1684
⅜	1.595	1404
½	2.125	1054
⅝	2.660	842
¾	3.190	702
⅞	3.720	602
1	4.250	527
1½″ x ⅛″	.638	3511
3/16	.956	2343
¼	1.275	1756
5/16	1.595	1404
⅜	1.913	1171
½	2.550	878
⅝	3.190	702
¾	3.825	585
⅞	4.460	502
1	5.100	439
1¾″ x ⅛″	.744	3011
3/16	1.115	2009
¼	1.488	1505
5/16	1.860	1204
⅜	2.230	1005
½	2.975	753
⅝	3.720	602
¾	4.460	502
⅞	5.210	430
1	5.950	376
1¼	7.440	301
2″ x ⅛″	.850	2635
3/16	1.275	1756
¼	1.700	1318
5/16	2.125	1054
⅜	2.550	878
½	3.400	659
⅝	4.250	527
¾	5.100	439
⅞	5.950	376
1	6.800	329
1¼	8.500	263
1½	10.200	219
2¼″ x ⅛″	.956	2343
3/16	1.435	1561
¼	1.913	1171
5/16	2.390	937
⅜	2.870	780
½	3.825	585
⅝	4.780	468
¾	5.740	390
⅞	6.690	335
1	7.650	293
2½″ x ⅛″	1.063	2107
3/16	1.595	1404
¼	2.125	1054
5/16	2.660	842
⅜	3.190	702
½	4.250	527
⅝	5.310	421
¾	6.380	351
⅞	7.440	301
1	8.500	263
1¼	10.630	211
1½	12.750	176
2¾″ x ⅛″	1.169	1916
3/16	1.753	1278
¼	2.338	958
5/16	2.920	767
⅜	3.510	638
½	4.675	479
⅝	5.840	383
¾	7.010	319
⅞	8.180	274
1	9.350	240
1¼	11.690	192
1½	14.030	159
3″ x ⅛″	1.275	1756
3/16	1.913	1171
¼	2.550	878
5/16	3.190	702
⅜	3.825	585
½	5.100	439
⅝	6.380	351
¾	7.650	293
⅞	8.930	251
1	10.200	219
1¼	12.750	176
1½	15.300	146
2	20.400	110
3½″ x ⅛″	1.488	1505
3/16	2.223	1004
¼	2.975	753
5/16	3.720	602
⅜	4.463	502
½	5.950	376
⅝	7.440	301
¾	8.930	251
⅞	10.410	215
1	11.900	188
1¼	14.880	150
3¾″ x ⅛″	1.594	1405
3/16	2.391	937
¼	3.188	702
5/16	3.980	563
⅜	4.780	468
½	6.380	351
⅝	7.970	281
¾	9.560	234
⅞	11.160	201
1	12.750	176
4″ x ⅛″	1.700	1318
¼	3.400	659
⅜	5.100	439
½	6.800	329
⅝	8.500	263
¾	10.200	219
⅞	11.900	188
1	13.600	165
1¼	17.000	132
1½	20.400	110
2	27.200	82
4½″ x ⅛″	1.913	1171
¼	3.825	585
⅜	5.740	390
½	7.650	293
⅝	9.560	234
¾	11.480	195
⅞	13.390	167
1	15.300	146
5″ x ⅛″	2.125	1054
¼	4.250	527
⅜	6.380	351
½	8.500	263
⅝	10.630	211
¾	12.750	176
⅞	14.880	150
1	17.000	132
1¼	21.250	105
1½	25.500	88
2	34.000	66
6″ x ⅛″	2.550	878
¼	5.100	439
⅜	7.650	293
½	10.200	219
⅝	12.750	176
¾	15.300	146
⅞	17.850	125
1	20.400	110
1¼	25.500	88
1½	30.600	73
2	40.800	55
6½″ x 3/16″	4.144	540
¼	5.525	405
5/16	6.91	324
⅜	8.29	270
½	11.05	203
⅝	13.81	163
¾	16.58	135
1	22.10	101
7″ x 3/16″	4.463	502
¼	5.95	376
⅜	8.93	250
½	11.9	188
⅝	14.88	150
¾	17.85	126
1	23.8	94
1¼	29.75	76
1½	35.7	63
7½″ x ⅜″	9.56	234
½	12.75	175
1	25.5	87
8″ x 3/16″	5.1	439
¼	6.8	329
5/16	8.5	263
⅜	10.2	219
½	13.6	164
⅝	17	131
¾	20.4	109
⅞	23.8	94
1	27.2	82
1¼	34	66
1½	40.84	55
2	54.4	41
9″ x ¼″	7.65	292
5/16	9.56	234
⅜	11.48	195
½	15.3	146
⅝	19.13	117
¾	22.95	98
1	30.6	73
1¼	38.25	58
1½	45.9	49
10″ x ¼″	8.5	263
⅜	12.75	175
½	17	131
⅝	21.25	105
¾	25.5	87
1	34	66
1¼	42.5	52.7
1½	51	44
12″ x ¼″	10.20	219
5/16	12.75	175
⅜	15.3	146
½	20.4	110
⅝	25.5	88
¾	30.6	73
⅞	35.7	63
1	40.8	55
1¼	51	44
1½	61.2	37
1¾	71.40	31.3

BLACK STEEL ROLLED ANGLES

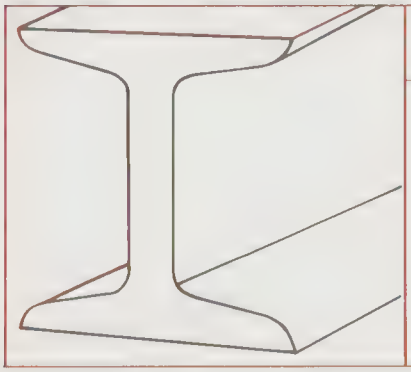


Length 20—30 feet

Size ins.	Thickness ins.	Weight per foot in lbs.	Feet per ton
1 x 1	1/8	.80	2800
	3/16	1.15	1948
	1/4	1.49	1503
1 1/4 x 1 1/4	1/8	1.02	2240
	3/16	1.48	1544
	1/4	1.91	1173
	5/16	2.34	973
1 1/2 x 1 1/2	1/8	1.23	1866
	3/16	1.79	1251
	1/4	2.34	957
	5/16	2.85	786
1 3/4 x 1 3/4	1/8	1.46	1493
	3/16	2.11	1062
	1/4	2.76	811
	5/16	3.39	661
	3/8	4.02	557
2 x 2	1/8	1.67	1341
	3/16	2.43	922
	1/4	3.19	702
	5/16	3.92	571
	3/8	4.62	485
2 1/4 x 2 1/4	3/16	2.77	809
	1/4	3.61	620
	5/16	4.45	503
	3/8	5.26	426
2 1/2 x 2	3/16	2.75	815
	1/4	3.61	620
	5/16	4.45	503
	3/8	5.26	426
2 1/2 x 2 1/2	3/16	3.10	723
	1/4	4.04	554
	5/16	4.98	450
	3/8	5.90	380
	1/2	7.65	293
3 x 2	3/16	3.08	728
	1/4	4.04	554
	5/16	4.98	450
	3/8	5.90	380
	1/2	7.65	293
3 x 2 1/2	3/16	3.40	659
	1/4	4.46	502
	5/16	5.51	407
	3/8	6.54	343
	1/2	8.50	263
3 x 3	3/16	3.73	601
	1/4	4.89	458
	5/16	6.05	370
	3/8	7.17	312
	1/2	9.35	240
	5/8	11.42	196
3 1/2 x 2 1/2	3/16	3.74	599
	1/4	4.89	458
	5/16	6.05	370
	3/8	7.17	312
	1/2	9.35	240
3 1/2 x 3	1/4	5.32	421
	5/16	6.58	340
	3/8	7.81	287
	1/2	10.20	220
3 1/2 x 3 1/2	1/4	5.74	390
	5/16	7.11	315
	3/8	8.45	265
	1/2	11.05	203
	5/8	13.55	165
4 x 3	1/4	5.75	390
	5/16	7.11	315
	3/8	8.45	265
	1/2	11.05	203
	5/8	13.35	165
4 x 4	1/4	6.60	340
	5/16	8.10	276.5
	3/8	9.72	230
	1/2	12.75	176
	5/8	15.67	143
5 x 3	1/4	6.60	340
	5/16	8.17	274
	3/8	9.72	230
	1/2	12.75	176
	5/8	15.67	143
5 x 3 1/2	5/16	8.70	257
	3/8	10.30	217
	1/2	13.6	165
	5/8	16.70	134
5 x 5	5/16	10.40	215
	3/8	12.28	182
	1/2	16.16	139
	5/8	19.92	112
	3/4	23.59	95
6 x 3 1/2	5/16	9.7	231
	3/8	11.63	193
	7/16	13.5	166
	1/2	15.3	146
	5/8	18.86	119
6 x 4	3/8	12.28	182
	7/16	14.20	158
	1/2	16.16	139
	5/8	19.93	112
	3/4	23.59	95
6 x 6	3/8	14.82	151
	7/16	17.19	130
	1/2	19.55	115
	9/16	21.86	102
	5/8	24.17	93
	3/4	28.69	78
	7/8	33.04	68
	1	37.50	60
8 x 8	1/2	26.60	84
	5/8	32.68	69
	3/4	38.89	58
	7/8	45.00	50
	1	51.01	44

ROLLED STEEL JOISTS Lengths 20—35 feet

SIZES AND THEORETICAL WEIGHTS



Size ins.	Weight lbs. per foot	Feet per ton	Size ins.	Weight lbs. per foot	Feet per ton
4 x 1¾	5	448.0	10 x 6	40	56.0
4 x 3	10	224.0	12 x 5	30	74.7
5 x 2½	9	248.9	12 x 8	65	34.5
6 x 3	12	186.7	13 x 5	35	64.0
6 x 5	25	89.6	14 x 5½	40	56.0
7 x 3½	15	149.3	15 x 6	45	49.8
8 x 4	18	124.4	16 x 6	50	44.8
8 x 6	35	64.0	18 x 6	55	40.7
9 x 4	21	106.7	20 x 6½	65	34.5
10 x 4½	25	89·6	24 x 7½	95	23.6

UNIVERSAL BEAMS

Section	Weight per	Depth of	Flange		Web
Nominal Size	Foot	Section	Width	Thickness	Thickness
Inches	Lbs.	Inches	Inches	Inches	Inches
	196	31.22	10.836	1.461	0.900
	180	31.00	10.766	1.349	0.830
30 x 10½	164	30.76	10.694	1.232	0.758
	148	30.53	10.622	1.115	0.686
	132	30.30	10.551	1.000	0.615
	116	30.00	10.500	0.850	0.564
	99	29.68	10.444	0.690	0.508
	114	27.28	10.070	0.932	0.570
27 x 10	102	27.07	10.018	0.827	0.518
	94	26.91	9.990	0.747	0.490
	84	26.69	9.962	0.637	0.462
	94	24.29	9.061	0.872	0.516
24 x 9	84	24.09	9.015	0.772	0.470
	76	23.91	8.985	0.682	0.440
	68	23.71	8.961	0.582	0.416
	82	21.44	8.342	0.840	0.502
	73	21.24	8.295	0.740	0.455
21 x 8¼	68	21.13	8.270	0.685	0.430
	62	20.99	8.240	0.615	0.400
	55	20.80	8.216	0.520	0.376
	66	18.40	7.592	0.770	0.450
	60	18.25	7.558	0.695	0.416
18 x 7½	55	18.12	7.532	0.630	0.390
	50	18.00	7.500	0.570	0.358
	45	17.86	7.476	0.500	0.334
	50	16.25	7.073	0.628	0.380
16 x 7	45	16.12	7.039	0.563	0.346
	40	16.00	7.000	0.503	0.307
	36	15.85	6.992	0.428	0.299
	45	14.33	6.820	0.618	0.357
14 x 6¼	38	14.12	6.776	0.513	0.313
	34	14.00	6.750	0.453	0.287
	30	13.86	6.733	0.383	0.270
	36	12.24	6.565	0.540	0.305
12 x 6½	31	12.09	6.525	0.465	0.265
	27	11.96	6.500	0.400	0.240
	29	10.22	5.799	0.500	0.289
10 x 5¾	25	10.08	5.762	0.430	0.252
	21	9.90	5.750	0.340	0.240
8 x 5¼	20	8.14	5.268	0.378	0.248
	17	8.00	5.250	0.308	0.230

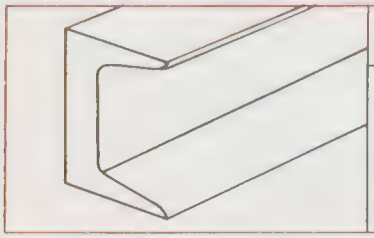
UNIVERSAL COLUMNS

Section	Weight per	Depth of	Flange		Web
Nominal Size	Foot	Section	Width	Thickness	Thickness
Inches	Lbs.	Inches	Inches	Inches	Inches
	264	16.64	15.331	2.007	1.251
	232	16.18	15.185	1.777	1.105
	200	15.71	15.040	1.542	0.960
14 x 14½	168	15.23	14.890	1.305	0.810
	136	14.75	14.740	1.063	0.660
	119	14.50	14.650	0.938	0.570
	103	14.25	14.575	0.813	0.495
	87	14.00	14.500	0.688	0.420
	190	14.38	12.670	1.736	1.060
	161	13.88	12.515	1.486	0.905
	133	13.38	12.365	1.236	0.755
12 x 12	106	12.88	12.230	0.986	0.620
	92	12.62	12.155	0.856	0.545
	79	12.38	12.080	0.736	0.470
	65	12.12	12.000	0.606	0.990
	112	11.38	10.415	1.248	0.755
	89	10.88	10.275	0.998	0.615
10 x 10	72	10.50	10.170	0.808	0.510
	60	10.25	10.075	0.683	0.415
	49	10.00	10.000	0.558	0.340
	58	8.75	8.222	0.808	0.510
	48	8.50	8.117	0.683	0.405
8 x 8	40	8.25	8.077	0.558	0.365
	35	8.12	8.027	0.493	0.315
	31	8.00	8.000	0.433	0.288
	25	6.37	6.080	0.454	0.320
6 x 6	20	6.20	6.018	0.369	0.258
	15.7	6.00	6.000	0.269	0.140

ROLLED STEEL CHANNELS

SIZES AND THEORETICAL WEIGHTS

Lengths 20 — 35 feet



Size inches	Weight lbs. per foot	Feet per ton	Size inches	Weight lbs. per foot	Feet per ton
3 x 1½	4.60	497.8	8 x 3	15.96	140
4 x 2	7.09	320	9 x 3	17.46	128
5 x 2½	10.22	224	10 x 3½	24.00	93.3
6 x 3	12.41	186.7	12 x 3½	28.00	80
7 x 3	14.22	160	15 x 4	37.00	60.5

RECTANGULAR HOLLOW SECTION TUBES

Conforming to B.S.15: 1961 (also A.S. No. A149: 1965) for Physical Properties and to B.S.4: Part 2: 1965 (also A.S. Nos. A147: 1958 & A1.....) for Dimensions.

STANDARD SIZES

□ SQUARES				□ SQUARES				▭ RECTANGLES				▭ RECTANGLES			
Size inches	Thick-ness inches	Ft. per ton (app.)	Weight per foot lbs.	Size inches	Thick-ness inches	Ft. per ton (app.)	Weight per foot lbs.	Size inches	Thick-ness inches	Ft. per ton (app.)	Weight per foot lbs.	Size inches	Thick-ness inches	Ft. per ton (app.)	Weight per foot lbs.
½ x ½	0.072	5,773	0.39	4 x 4	0.160	276	8.13	2 x 1	0.104	1,191	1.88	5 x 2½	0.188	248	9.02
⅝ x ⅝	0.072	4,392	0.51		0.192	233	9.62		0.128	1,000	2.24		0.250	190	11.8
¾ x ¾	0.072	3,544	0.63		0.250	184	12.2	2½ x 1⅜	0.128	762	2.94	5 x 3	0.188	232	9.66
	0.080	3,246	0.69		0.375	123	18.2						0.250	178	12.6
1 x 1	0.072	2,599	0.862	4½ x 4½	0.188	206	10.9	2½ x 1½	0.128	720	3.11		0.375	123	18.2
	0.092	2,113	1.06		0.250	157	14.3		0.160	593	3.78				
	0.104	1,915	1.17		0.375	108	20.8	3 x 1½	0.128	631	3.55	6 x 3	0.188	206	10.9
	0.128	1,635	1.37						0.160	519	4.32		0.250	157	14.3
1½ x 1½	0.104	1,191	1.88	5 x 5	0.188	184	12.2						0.375	108	20.8
	0.128	1,000	2.24		0.250	140	16.0	3 x 2	0.128	563	3.98				
	0.160	833	2.69		0.375	96	23.3		0.144	506	4.43	6 x 4	0.188	184	12.2
1⅞ x 1⅞	0.128	762	2.94						0.192	393	5.70		0.250	140	16.0
2 x 2	0.128	720	3.11	6 x 6	0.192	148	15.1		0.250	315	7.10		0.375	96	23.3
	0.160	593	3.78		0.250	115	19.4	3⅛ x 1⅝	0.128	593	3.78	8 x 4	0.192	148	15.1
	0.192	509	4.40		0.375	79	28.4						0.250	115	19.4
2⅛ x 2⅛	0.128	673	3.33					3½ x 1½	0.128	563	3.98		0.375	79	28.4
				7 x 7	0.232	105	21.3		0.160	460	4.87				
2½ x 2½	0.128	563	3.98		0.250	98	22.8					8 x 6	0.232	105	21.3
	0.144	506	4.43		0.281	88	25.6	4 x 2	0.128	461	4.86		0.250	98	22.8
	0.192	393	5.70		0.375	67	33.5		0.160	376	5.96		0.281	88	25.6
	0.250	315	7.10						0.192	320	7.01		0.375	67	33.5
3 x 3	0.128	461	4.86						0.250	255	8.80				
	0.160	376	5.96	8 x 8	0.232	92	24.4	4 x 3	0.144	351	6.39	10 x 6	0.232	92	24.4
	0.192	320	7.01		0.250	85	26.2		0.160	318	7.04		0.250	85	26.2
	0.250	255	8.80		0.281	76	29.4		0.192	269	8.32		0.281	76	29.4
3½ x 3½	0.144	351	6.39		0.375	58	38.6		0.250	213	10.5		0.375	58	38.6
	0.160	318	7.04	10 x 10	0.250	68	33.0	5 x 2	0.144	351	6.39	12 x 8	0.250	68	33.0
	0.192	269	8.32		0.375	46	48.8		0.192	269	8.32		0.375	46	48.8
	0.250	213	10.5		0.500	35	64.2		0.250	213	10.5		0.500	35	64.2

SOFT BLACK STEEL WIRE

In Coils Approximately 1 cwt.

Gauge	4	6	8	10	12	14	16	18	20
Yds. per cwt.	260	380	546	854	1293	2186	3416	6073	10796

MILD STEEL AND BOILER PLATE

Widths 36″ — 72″
Lengths 6 — 20 feet

SIZE RANGE AND THEORETICAL WEIGHTS

Thickness	1/8″	3/16″	1/4″	5/16″	3/8″	7/16″	1/2″	9/16″	5/8″	
Weight lbs. per sq. ft.	5.1	7.65	10.2	12.75	15.3	17.84	20.4	22.95	25.5	
Thickness	3/4″	7/8″	1″	1 1/8″	1 1/4″	1 3/8″	1 1/2″	1 5/8″	1 3/4″	2″
Weight lbs. per sq. ft.	30.6	35.7	40.8	45.9	51.0	56.1	61.2	66.3	71.4	81.6

FLOOR PLATE

Widths 36″ — 60″
Lengths 6 — 20 feet

SIZE RANGE

Thickness	1/4″	5/16″	3/8″
Weight lbs. per sq. ft.	10.94	13.49	16.04

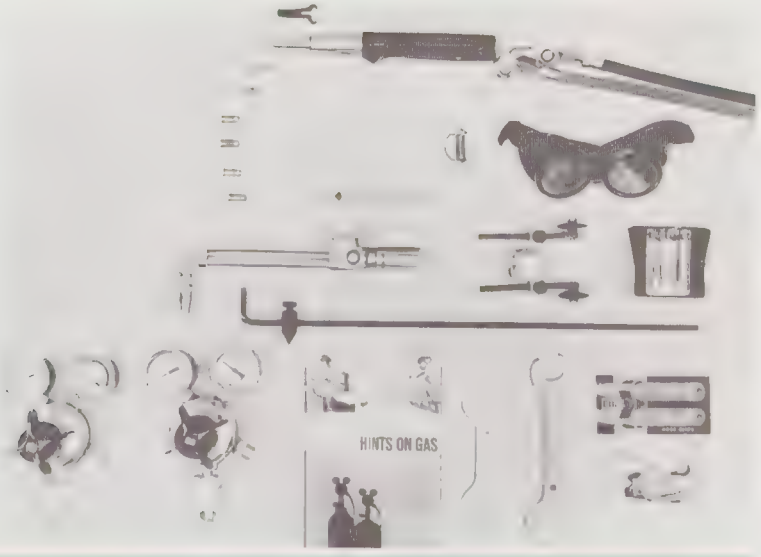
AREAS AND CIRCUMFERENCES OF CIRCLES

Diam. ins.	Circum. in ins.	Area in sq. ins.	Diam. ins.	Circum. in ins.	Area in sq. ins.	Diam. ins.	Circum. in ins.	Area in sq. ins.	Diam. ins.	Circum. in ins.	Area in sq. ins.
1/4	0.7854	0.049	21	65.974	346.46	42 1/2	133.518	1418.6	64	201.062	3217.0
1/2	1.5708	0.196	21 1/2	67.544	363.05	43	135.088	1452.2	64 1/2	202.633	3267.5
3/4	2.3562	0.442	22	69.115	380.13	43 1/2	136.659	1486.2	65	204.204	3318.3
1	3.1416	0.785	22 1/2	70.686	397.61	44	138.230	1520.5	65 1/2	205.774	3369.6
1 1/2	4.7124	1.767	23	72.257	415.48	44 1/2	139.801	1555.3	66	207.345	3421.2
2	6.2832	3.142	23 1/2	73.827	433.74	45	141.372	1590.4	66 1/2	208.916	3473.2
2 1/2	7.8539	4.908	24	75.398	452.39	45 1/2	142.942	1626.0	67	210.487	3525.7
3	9.4248	7.069	24 1/2	76.969	471.44	46	144.513	1661.9	67 1/2	212.056	3578.5
3 1/2	10.996	9.621	25	78.539	490.87	46 1/2	146.084	1692.2	68	213.628	3631.7
4	12.566	12.566	25 1/2	80.110	510.71	47	147.655	1734.9	68 1/2	215.199	3685.3
4 1/2	14.137	15.904	26	81.681	530.93	47 1/2	149.226	1772.1	69	216.770	3739.3
5	15.708	19.635	26 1/2	83.252	551.55	48	150.796	1809.6	69 1/2	218.341	3793.7
5 1/2	17.278	23.758	27	84.823	572.56	48 1/2	152.367	1847.5	70	219.991	3848.5
6	18.849	28.274	27 1/2	86.394	593.96	49	153.938	1885.7	70 1/2	221.482	3903.6
6 1/2	20.420	33.184	28	87.964	615.75	49 1/2	155.509	1924.2	71	223.053	3959.2
7	21.991	38.485	28 1/2	89.535	637.94	50	157.080	1963.5	71 1/2	224.624	4015.2
7 1/2	23.562	44.179	29	91.106	660.52	50 1/2	158.650	2003.0	72	226.195	4071.5
8	25.133	50.265	29 1/2	92.677	683.49	51	160.221	2042.8	72 1/2	227.765	4128.2
8 1/2	26.703	56.745	30	94.248	706.86	51 1/2	161.792	2083.1	73	229.336	4185.4
9	28.274	63.617	30 1/2	95.819	730.62	52	163.363	2123.7	73 1/2	230.907	4242.9
9 1/2	29.845	70.882	31	97.389	754.77	52 1/2	164.934	2164.8	74	232.478	4300.8
10	31.415	78.540	31 1/2	98.960	779.31	53	166.504	2206.2	74 1/2	234.049	4359.2
10 1/2	32.987	86.590	32	100.531	804.25	53 1/2	168.075	2248.0	75	235.619	4417.9
11	34.558	95.033	32 1/2	102.102	829.58	54	169.646	2290.2	75 1/2	237.190	4470.0
11 1/2	36.128	103.87	33	103.673	855.30	54 1/2	171.217	2332.8	76	238.761	4536.5
12	37.699	113.10	33 1/2	105.243	881.41	55	172.788	2375.8	76 1/2	240.332	4596.3
12 1/2	39.269	122.72	34	106.814	907.92	55 1/2	174.385	2419.2	77	241.903	4656.6
13	40.840	132.73	34 1/2	107.385	934.82	56	175.929	2463.0	77 1/2	243.473	4717.3
13 1/2	42.412	143.14	35	109.956	962.11	56 1/2	177.500	2507.2	78	245.044	4778.4
14	43.982	153.94	35 1/2	111.527	989.80	57	179.071	2551.8	78 1/2	246.615	4839.8
14 1/2	45.553	165.13	36	113.097	1017.9	57 1/2	180.642	2596.7	79	248.186	4901.7
15	47.124	176.71	36 1/2	114.668	1046.3	58	182.212	2642.1	79 1/2	249.757	4963.9
15 1/2	48.695	188.69	37	116.239	1085.2	58 1/2	183.783	2687.8	80	251.327	5026.5
16	50.265	201.06	37 1/2	117.810	1104.5	59	189.354	2734.0	80 1/2	252.898	5089.6
16 1/2	51.836	213.82	38	119.381	1134.1	59 1/2	186.925	2780.5	81	254.469	5153.0
17	53.407	226.98	38 1/2	120.951	1164.2	60	188.496	2827.4	81 1/2	256.040	5216.8
17 1/2	54.978	240.53	39	122.522	1194.6	60 1/2	190.066	2874.8	82	257.611	5281.0
18	56.549	254.47	39 1/2	124.093	1225.4	61	191.637	2922.5	82 1/2	259.181	5345.6
18 1/2	58.119	268.80	40	125.664	1256.6	61 1/2	193.208	2970.6	83	260.752	5410.6
19	59.680	283.53	40 1/2	127.235	1288.2	62	194.779	3019.7	83 1/2	262.323	5476.0
19 1/2	61.261	298.65	41	128.805	1320.3	62 1/2	196.350	3068.0	84	263.894	5541.8
20	62.832	314.16	41 1/2	130.376	1352.7	63	197.920	3117.2			
20 1/2	64.403	330.06	42	131.947	1385.4	63 1/2	199.491	3166.9			

COMWELD WELDING AND CUTTING PLANTS

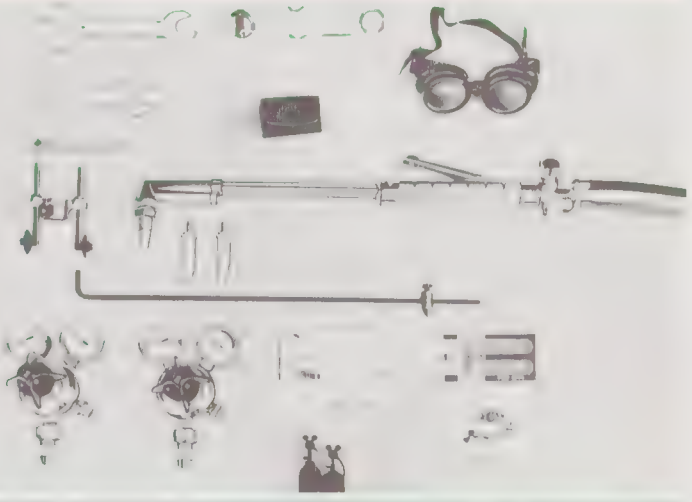
COMBINED WELDING AND CUTTING PLANT FOR GENERAL WORK

XA56 — Comprises COMET 2 equal pressure welding blowpipe, cutting attachment, COMPACT regulators, tubing and accessories, including instruction booklet.



MULTI-PURPOSE CUTTING PLANTS

XA42 — Comprises Oxy-HANDIGAS MULTI-PURPOSE blowpipe, regulators, tubing, Type 44 taper-seat nozzles and accessories.
XA43 — Comprises Oxy-Acetylene MULTI-PURPOSE blowpipe, COMPACT regulators, tubing accessories and Type 41 taper-seat nozzles.
XA44 — Same as XA42 except that one-piece Type 34 nozzles replace Type 44 nozzles.
XA45 — Same as XA43 except that Type 31 one-piece nozzles replace Type 41 nozzles.



WELDING PLANT FOR GENERAL WORK

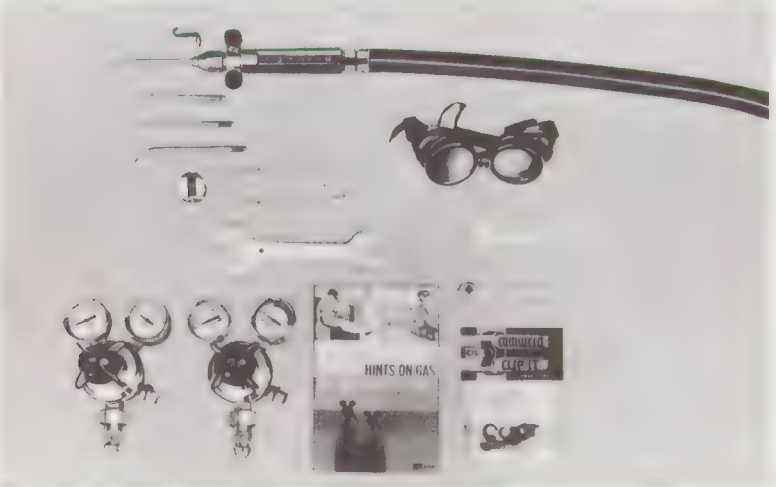
XA31 — Comprises COMET 2 equal pressure welding blowpipe, COMPACT regulators, tubing and accessories, including instruction booklet.
The COMET 2 blowpipe will handle any welding or heating job with ease and economy. Its swaged copper tips resist overheating and give excellent work visibility. The COMPACT regulators allow safe, accurate adjustment of working pressures.

COMWELD WELDING AND CUTTING PLANTS

COMBINED WELDING AND CUTTING LIGHTWEIGHT PLANT

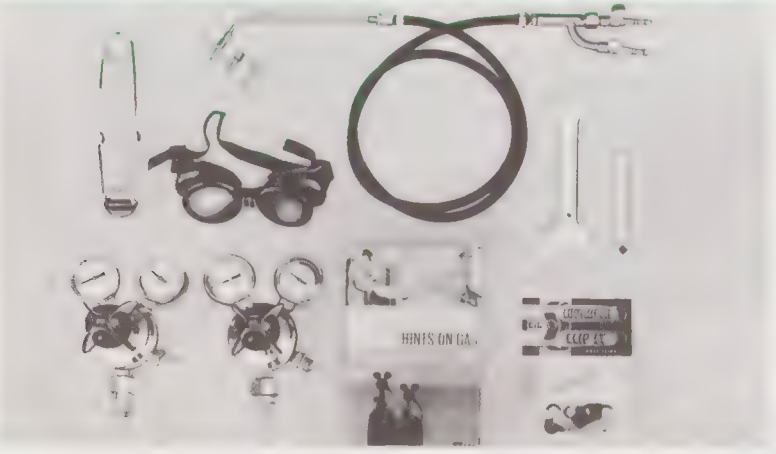
XA52 — Comprises COMET JUNIOR lightweight blowpipe, cutting attachment, COMPACT regulators, tubing and accessories, including instruction booklet. Although it weighs only 13 oz the COMET JUNIOR blowpipe is of sturdy construction and is ideally suited to production work.

XA47 — Also available is the XA47 Oxy-HANDIGAS lightweight cutting and heating plant. Similar to XA52 except that swaged heating tips replace welding tips.



LIGHTWEIGHT WELDING PLANT

XA48 — Comprises COMET JUNIOR lightweight blowpipe, COMPACT regulators, tubing and accessories, including instruction booklet. Although it weighs only 13 oz the blowpipe is of sturdy construction and is especially suitable for production work. The COMET JUNIOR has a unique all-purpose mixer and is suitable for either oxy-acetylene or Oxy-HANDIGAS operation.

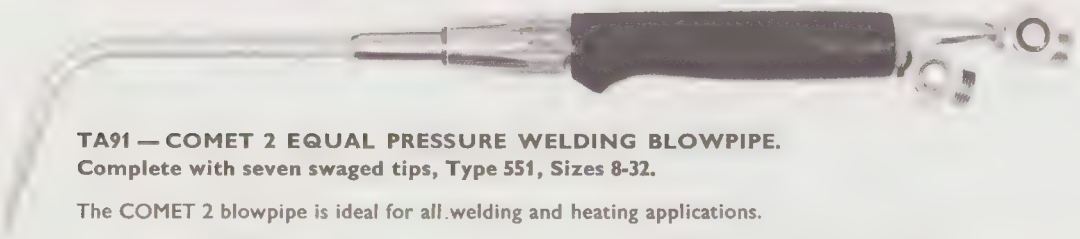


PLANT FOR LEAD WELDING

XA40 — Comprises lead welding blowpipe, COMPACT regulators, tubing and accessories, including instruction booklet.

This plant is used for lead-welding (e.g., in battery manufacture), light soldering brazing and heating. The blowpipe's small but intense flame is specially suited to the repair and manufacture of jewellery, radio and television sets, toys, delicate instruments, dentures, etc.

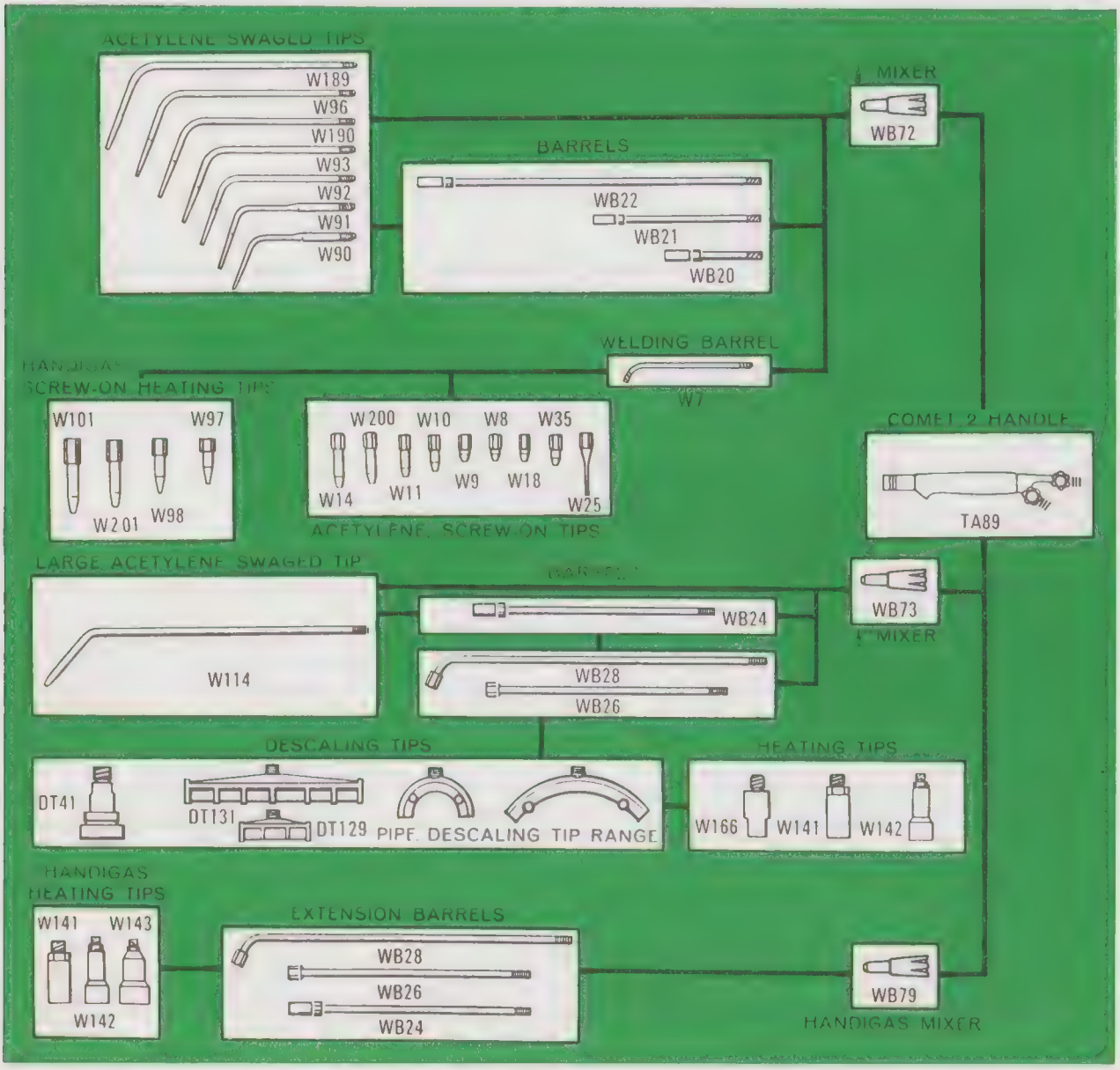
COMET 2 WELDING BLOWPIPE — ATTACHMENTS



TA91 — COMET 2 EQUAL PRESSURE WELDING BLOWPIPE.
Complete with seven swaged tips, Type 551, Sizes 8-32.

The COMET 2 blowpipe is ideal for all welding and heating applications.

- New VALVE-IN-VALVE provides the same ease of control for the smallest brazing job to the largest heating job requiring up to 1,000,000 BTU per hour.
- Will weld steel up to ½ in thick.
- Patented flashback-free multi-mixer for the most economical gas mixing.



COMET 2 WELDING BLOWPIPE ATTACHMENTS

W90 **W91** **W92** **W93** **W190** **W96** **W189**	**SWAGED ACETYLENE TIPS TYPE 551 FOR COMET 2 BLOWPIPE** Tips can be obtained individually or in a set of seven. Made of pure copper they give maximum resistance to overheating and give excellent work visibility. Fit into $\frac{3}{8}$″ mixer, WB72.
TA91	Set of the above seven swaged tips complete with the COMET 2 blowpipe.
WB21 **WB22**	**STRAIGHT EXTENSION BARRELS** For COMET 2 blowpipe with $\frac{3}{8}$″ mixer. WB21, 3″ long. WB22, 17″ long.
WB72	$\frac{3}{8}$″ **COMET 2 MIXER** For use with the COMET 2 blowpipe for all general welding applications — for type 551 tips.
TA89	**COMET 2 HANDLE**
WB73	$\frac{1}{2}$″ **COMET 2 MIXER** For use with the COMET 2 blowpipe with barrels, large acetylene swaged tip, descaling and heating tips.
WB79	**HANDIGAS MIXER** For COMET 2 blowpipe with type 544, W141, W142, and W143 heating tips.
W7	**WELDING BARREL** For screw-on tips Type 510.
W8-W11 **W200** **W14** **W18** **W35**	**WELDING TIPS** Type 511 for W7 welding barrel. W8 to W11 Sizes 8, 10, 12, 15. Size 20. Size 26. Size 6. Size 5.
W25	**TIP — RADIATOR WELDING** For use with COMET 2 blowpipe.

WB28	**BENT EXTENSION BARREL** For COMET 2 blowpipe with $\frac{1}{2}$″ mixer. WB28 — 16″ long. Takes type 541, 544, flame cleaning and heating tips.
WB24 **WB26**	**STRAIGHT EXTENSION BARRELS** For COMET 2 blowpipe with $\frac{1}{2}$″ mixer. W B24 — 12″ long. Takes swaged tip W114. WB26— 14″ long. Takes flame cleaning and heating tips.
W97 **W98** **W201** **W101**	**HEATING TIPS TYPE 514 — HANDIGAS** W97 to W101 — Sizes 12, 15, 20, 26. For use with COMET 2 blowpipe with W7 welding barrel.
W114	**LARGE SWAGED TIP TYPE 571.** For use with COMET 2 blowpipe with $\frac{1}{2}$″ mixer. W114 — Size 38.
DT129 **DT131** **DT41** **DT54** **DT87**	**FLAME CLEANING — DESCALING TIPS TYPE 541** For use with COMET 2 blowpipe with $\frac{1}{2}$″ mixer. DT129 — Flat tip, 3″ wide; DT131 — Flat tip, 7″ wide. DT41 — Round tip; DT54 — for $1\frac{1}{4}$″ pipe; DT87 — for $8\frac{5}{8}$″ pipe; DT67 — for 1″ pipe; DT68 — for $1\frac{1}{2}$″ pipe; DT69 — for $2\frac{1}{2}$″ pipe; DT70 — for 6″ pipe; DT71 — for 3″ pipe; DT72 —for 4″ pipe; DT73 — for 5″ pipe.
W141 **W142** **W143**	**MULTI-HOLE HEATING TIPS TYPE 544, OXY-HANDIGAS.** W141 — Standard tip; W142 — Medium tip; W143 — Large tip. See WB79
W166	**HEATING TIP TYPE 541** A 4-flame oxyacetylene heating tip. For use with COMET 2 blowpipe with $\frac{1}{2}$″ mixer.

TIP IDENTIFICATION

Two sets of numbers stamped on the body of the tip tell us — type of tip, fuel gas and the size. The tip designation table contains all the information — To apply it see "nozzle identification" on page 139. The system for nozzles and tips is identical.

COMWELD TIP SIZE CONVERSIONS

NEW STANDARD	8	10	12	15	17	20		26	32			38
Old Designation	1	2	3	4	5		6	7		8	9	10

COMWELD TIP DESIGNATION

Type		Thread Size
510		$\frac{3}{8}$″–26 tpi.
520		$\frac{5}{16}$″ – 26 tpi.
530		$\frac{1}{4}$″ – 26 tpi.
540		$\frac{3}{8}$″ – 18 tpi.
550		$\frac{3}{8}$″ – 26 tpi.
560		$\frac{5}{16}$″ – 26 tpi.
570		$\frac{1}{2}$″ – 20 tpi.
GAS	1 Acetylene, 3 Coal Gas 4 HANDIGAS, 5 Hydrogen	

POWDER FACING KIT TF16

This efficient method of hard facing involves spraying hard facing powder through the blowpipe to the job.

TA89 — Blowpipe handle.

TH7 — Powder spray attachment complete with hopper.

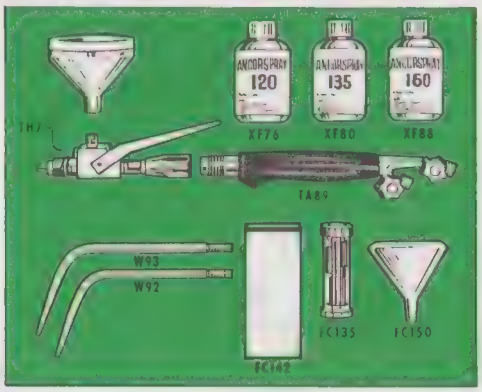
W92, W93—Swaged tips, sizes 12 and 15.

XF88, 80, 76 — 3 by 1 lb. containers of powder grades 160, 135 and 120.

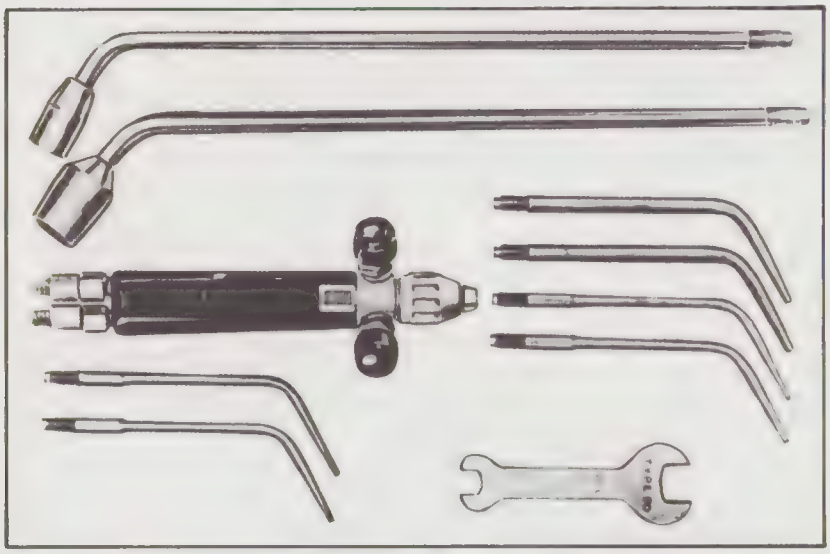
FC135 — 2 spare rubber valves.

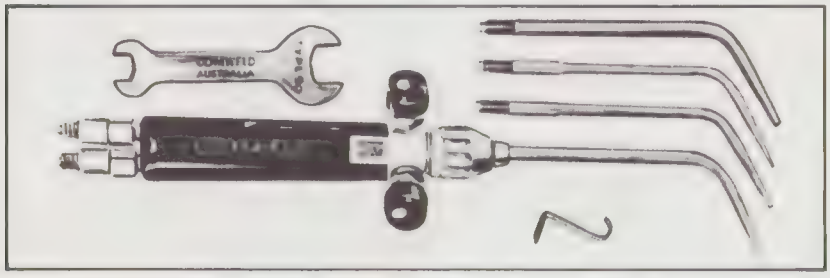
FC150 — Funnel.

FC142 — Holding bracket.



WELDING BLOWPIPES





COMET JUNIOR

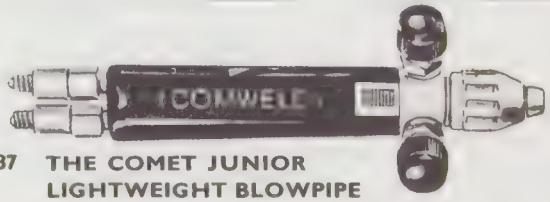
The COMET JUNIOR is a highly versatile, lightweight blowpipe. The range of attachments illustrated at left enables it to be used for a wide variety of welding and heating applications. A cutting attachment is also available.

KITS: Three COMET JUNIOR kits are available, the TF9 oxy-acetylene welding kit (illustrated lower left) for general welding applications. The TF3, an oxy-acetylene welding and cutting kit which is identical to the TF9 with the addition of a cutting attachment (TD38) and nozzle. Also available is an oxy-HANDIGAS heating and cutting kit TF4. This differs from the TF3 in that two swaged heating tips, W177 and W179 replace the four swaged welding tips. Kits are supplied in attractive cartons which also serve as storage and carrying cases.

Oxy-Acetylene

W176
W175
W174
W173

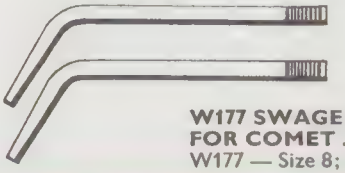
W184 SET OF 4 SWAGED TIPS TYPE 561 FOR COMET JUNIOR
W173 — Size 6; W174 — Size 8;
W175 — Size 12; W176 — Size 15.



TA37 THE COMET JUNIOR LIGHTWEIGHT BLOWPIPE

A lightweight (only 13 oz.) blowpipe, the COMET JUNIOR has a unique all-purpose mixer which accommodates both oxy-acetylene and oxy-HANDIGAS. Controls are grouped together at front of blowpipe to enable one hand flame adjustment and operation. Of robust construction, the COMET JUNIOR is ideally suited to production work.

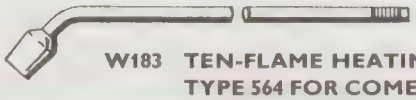
Oxy-Handigas



W177
W179

W177 SWAGED TIPS TYPE 564 FOR COMET JUNIOR
W177 — Size 8; W179 — Size 15.

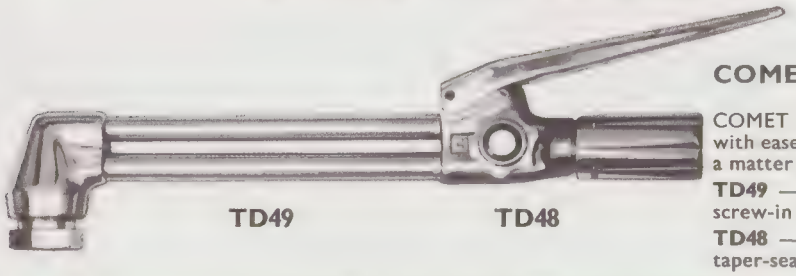
W187 FOUR-FLAME HEATING TIP TYPE 561 FOR COMET JUNIOR



W183 TEN-FLAME HEATING TIP TYPE 564 FOR COMET JUNIOR

T164	T166	T302	T79	T829
OXY-ACETYLENE LEAD WELDING	OXY-HYDROGEN LEAD WELDING	OXY-COAL GAS LEAD WELDING	OXY-COAL GAS LEAD WELDING	PLASTIC WELDING

CUTTING ATTACHMENTS FOR BLOWPIPES



TD49 TD48

COMET 2 CUTTING ATTACHMENT

COMET 2 cutting attachments cut steel up to 4″ thick with ease. Connects to the COMET 2 blowpipe handle in a matter of seconds.

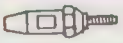
TD49 — Cutting attachment for Series 30 one-piece screw-in nozzles.

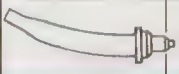
TD48 — Cutting attachment for use with Series 40 taper-seat nozzles.

COMWELD FLAME CUTTING NOZZLES FOR COMET 2 BLOWPIPE

TYPE 31 — SCREW-IN ACETYLENE NOZZLES	
	C3-C6 and C11. **GENERAL PURPOSE CUTTING NOZZLES.** C3-C6. Sizes 8, 12, 15, 20; C11, Size 6.
	C10. **SHORT NOZZLE.** Size 12SN.
	C22, C79. **RIVET-CUTTING ATTACHMENTS.** C22, Size 15RC, C79, Size 10RC.
	C227. **STRAIGHT GOUGING NOZZLE.** Size 32GS.
	C80. **SHEET METAL CUTTING ATTACHMENT.** Size 6SM.

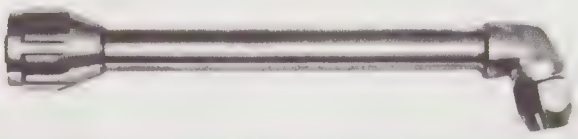
TYPE 41 — TAPER-SEAT ACETYLENE NOZZLES	
	C502-C505. **GENERAL PURPOSE CUTTING NOZZLES.** Sizes 8, 12, 15, 20.
	C151-2. **BENT GOUGING NOZZLE.** C151. Size 32GB. C152, Size 48GB.
	C368. **SHEET METAL CUTTING NOZZLE.** Size 6SM.
	C366, C367. **RIVET-CUTTING NOZZLES.** C366, Size 10RC; C367, Size 15RC.

TYPE 34 — ONE-PIECE HANDIGAS NOZZLES	
	C287-C290. **GENERAL PURPOSE CUTTING NOZZLES.** C287-C290, Sizes, 8, 12, 15, 20.
	C293. **STRAIGHT GOUGING NOZZLES.** Size 32GS.

TYPE 44 — TAPER-SEAT HANDIGAS NOZZLES	
	C334-7. **GENERAL PURPOSE CUTTING NOZZLES — SLOTTED.** Sizes 8, 12, 15, 20.
	C421, C442. **BENT GOUGING NOZZLE.** C421, Size 32GB. C422, Size 48GB.

EXTENSION NOZZLE	TJ42 — ROLLER GUIDE, TJ31 — CIRCELINE ROLLER GUIDE AND RADIUS ROD.
C70 Extension nozzle for Type 30 nozzles	

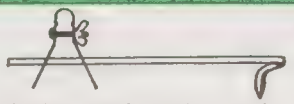
TD38



COMET JUNIOR CUTTING ATTACHMENT

Quickly connects to COMET JUNIOR Blowpipe handle. Takes low-cost flat-seat Type 91 nozzles for oxy-acetylene and Type 94 for oxy-HANDIGAS.

Cuts steel up to 2″ thick. Universal mixer means no time lost if changing from acetylene to HANDIGAS and no risk of flashbacks.

CUTTING NOZZLES OXY-ACETYLENE	SHEET METAL CUTTING NOZZLE OXY-ACETYLENE	CUTTING NOZZLES OXY-HANDIGAS	SKID GUIDE AND TRAMMEL
C370-2 TYPE 91 ACETYLENE CUTTING NOZZLES. C370, Size 8; C371, Size 12; C372, Size 15.	C377 TYPE 91 SHEET METAL CUTTING NOZZLE ACETYLENE. C377, Size 6SM.	C374-6 TYPE 94 HANDIGAS, CUTTING NOZZLES. C374, Size 8; C375, Size 12; C376, Size 15.	 TJ16 The skid guide fits firmly on to the cutting attachment for straight-line cutting — square or bevelled edges. Trammel fitted to skid guide enables circles up to 12″ diameter to be cut — square or bevelled edge.

HAND CUTTING BLOWPIPES

TD31. HANDIGAS, 20½″ long.
TD32. ACETYLENE, 20½″ long.
TD46. HANDIGAS, 36″ long, straight head.
TD47. ACETYLENE, 36″ long, straight head.

C298

MULTI-PURPOSE BLOWPIPE

The MULTI-PURPOSE Blowpipe uses the best mixing principle for each gas mixture. For oxy-acetylene an equal pressure mixer is used — proved best by far. For oxy-HANDIGAS a special suction-jet mixing cartridge is used which allows ample gas flows for any application. Type 40 taper-seat nozzles are used in the MULTI-PURPOSE blowpipe.

C298. — An adaptor to take Type 31 and 34 one-piece nozzles.

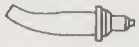
COMWELD FLAME CUTTING NOZZLES* FOR MULTI-PURPOSE BLOWPIPE

* Refer to page 139 for nozzles designations

TYPE 41 — TAPER-SEAT ACETYLENE NOZZLES

C502-7. **GENERAL PURPOSE CUTTING NOZZLES.** Sizes 32 (1/8″), 24 (3/32″), 20 (3/64″), 15 (1/16″), 12 (3/64″), 8 (1/32″)

C151-3. **BENT GOUGING NOZZLES.** Sizes 32GB (13), 48GB (19), 64GB (25).


C154. **BENT NOZZLE.** Size 32BN. Riser Cutting.

C311. **HEATING TIP.**

C366-7. **RIVET-CUTTING NOZZLES.** C366, Size 10RC; C367, Size 15RC.

C368. **SHEET METAL CUTTING NOZZLE.** Size 6SM.

C195. **DESEAMING NOZZLE.** Size 64DS.

C209. **DEEP-GOUGING NOZZLE.** 60DG.

TYPE 31 — ONE-PIECE ACETYLENE NOZZLES

C3-C8 and C11. **GENERAL PURPOSE CUTTING NOZZLES.** C3-8, Sizes 8 (1), 12 (2), 15 (3), 20 (4), 24 (5), 32 (6), C11, Size 6 (0).

C10. **SHORT NOZZLE.** Size 12SN.

C22, C79. **RIVET CUTTING ATTACHMENTS.** C79, Size 10RC, C22, Size 15RC.

C72, C75. **UNDERWATER CUTTING NOZZLES.** C72. Size 12UW; C75, Size 20UW.

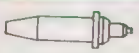
C76. **RIVET-WASHING NOZZLE.** Size 72RW.

C80. **SHEET METAL CUTTING ATTACHMENT.** Size 6SM.

C220. **HEATING TIP.**

C227. **STRAIGHT GOUGING NOZZLE.** Size 32GS.

TYPE 44 — TAPER-SEAT HANDIGAS NOZZLES


C334-9. **GENERAL PURPOSE CUTTING NOZZLES — SLOTTED.** Sizes 8, 12, 15, 20, 24, 32.

C312. **FLAME WASHING NOZZLE.**

C421-3. **BENT GOUGING NOZZLE.** Sizes 32GB (13). 48GB (19), 64GB (15).

C363. **HEATING TIP.**

TYPE 34 — ONE-PIECE HANDIGAS NOZZLES

C287-292. **GENERAL PURPOSE CUTTING NOZZLES.** Sizes 8 (1), 12 (2), 15 (3), 20 (4), 24 (5), 32 (6).

C293. **STRAIGHT GOUGING NOZZLE.** Size, 32GS.

TJ31 — CIRCLELINE ROLLER GUIDE AND RADIUS ROD

POWDER-CUTTING ATTACHMENTS

EXTENSION NOZZEL

C70
Extension nozzle for Type 30 nozzles

ALSO AVAILABLE: T364.—ALL PRESSURE CUTTING BLOWPIPE. TAKES TWO-PIECE ANNALUS TYPE 21 NOZZLES. A STRAIGHT HEAD VERSION OF THE T364 BLOWPIPE IS ALSO AVAILABLE.

MACHINE CUTTING NOZZLES

ACETYLENE

TYPE 41 TAPER SEAT ACETYLENE NOZZLES

C447
C502-C509

TAPER SEAT NOZZLES Type 41 for TD40 and TD45 (also obsolete TD18) machine blowpipes.

C447 — Size 64 ($\frac{1}{4}$")
C509 — Size 48 ($\frac{3}{16}$")
C508 — Size 40 ($\frac{5}{32}$")
C507 — Size 32 ($\frac{1}{8}$")
C506 — Size 24 ($\frac{3}{32}$")
C505 — Size 20 ($\frac{5}{64}$")
C504 — Size 15 ($\frac{1}{16}$")
C503 — Size 12 ($\frac{3}{64}$")
C502 — Size 8 ($\frac{1}{32}$")

C320
C510-515

HI-SPEED TAPER SEAT NOZZLES Type 41 for TD40 and TD45 machine blowpipes. Hi-Speed nozzles are particularly suited to straight line cutting. They enable 30% to 50% faster cutting speeds with oxygen savings of 30% per foot cut.

C510 — Size 6HS ($\frac{1}{40}$")
C511 — Size 8HS ($\frac{1}{32}$")
C512 — Size 12HS ($\frac{3}{64}$")
C513 — Size 15HS ($\frac{1}{16}$")
C514 — Size 20HS ($\frac{5}{64}$")
C515 — Size 24HS ($\frac{3}{32}$")

TYPE 61 HEAVY DUTY ACETYLENE NOZZLES

C237-C242

HEAVY DUTY NOZZLES for T683 Medium Pressure Heavy Duty Blowpipe. Enlarged versions of the taper seat nozzles, they have larger ports enabling heavier cutting operations.

C237 — Size 32 ($\frac{1}{8}$")
C238 — Size 40 ($\frac{5}{32}$")
C239 — Size 48 ($\frac{3}{16}$")
C240 — Size 56 ($\frac{7}{32}$")
C241 — Size 64 ($\frac{1}{4}$")
C242 — Size 72 ($\frac{9}{32}$")

HANDIGAS

TYPE 44 TAPER SEAT HANDIGAS NOZZLES

C430
C334-C339

TAPER SEAT SLOTTED NOZZLES Type 44 for TD40 and TD45 (also obsolete TD18) machine blowpipes.

C334 — Size 8
C335 — Size 12
C336 — Size 15
C337 — Size 20
C338 — Size 24
C339 — Size 32
C430 — Size 64

C346-C351

HI-SPEED TAPER SEAT NOZZLES Type 44 for TD40 and TD45 (also obsolete TD18) machine blowpipes. Hi-Speed nozzles are particularly useful for straight line cutting. They enable 30% to 50% faster cutting speeds with oxygen savings of 30% per foot cut.

C346 — Size 6HS
C347 — Size 8HS
C348 — Size 12HS
C349 — Size 15HS
C350 — Size 20HS
C351 — Size 24HS

TYPE 64 HEAVY DUTY HANDIGAS NOZZLES

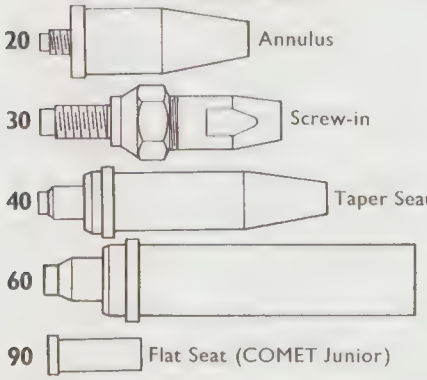
C452
C402-C407

HEAVY DUTY NOZZLES for T683 Medium Pressure Heavy Duty Blowpipe. Enlarged versions of the taper seat nozzles, they have larger ports enabling heavier cutting operations.

C402 — Size 32
C403 — Size 40
C404 — Size 48
C405 — Size 52
C406 — Size 64
C407 — Size 80
C452 — Size 96

COMWELD NOZZLES IDENTIFICATION

SERIES NUMBER



GAS NUMBER

1 = Acetylene
3 = Coal gas
4 = HANDIGAS (LP-Gas)

LETTER DESIGNATION FOR NOZZLES OTHER THAN STANDARD

SM Sheet Metal
GB Gouging Bent
GS Gouging Straight
RC Rivet Cutting
RW Rivet Washing
HS High Speed Cutting
DG Deep Gouging
DS Deseaming
FW Flame Washing
HT Heating Tip
PW Powder Washing

EXAMPLE

The first No. '4' is the series number. This tells us the type of nozzle.
'4' — Taper-Seat Nozzle.
The second No. '1' is the gas number, i.e. what gas to be used?
'1' — Acetylene.
The next two numbers '20' tell us the bore size of the nozzle.
'20' — 2.0 mm.
The two letters 'HS' indicate the nozzle is a special high-speed type.

COMWELD NOZZLE SIZE CONVERSIONS

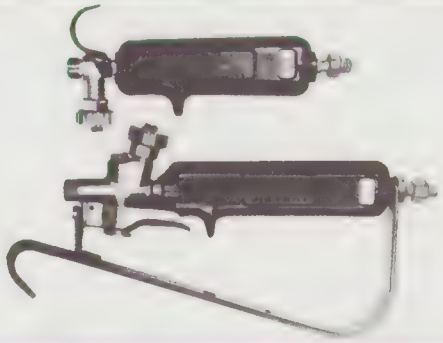
New Standard	—	8	10	12	15*	20	—	26	32	40	48	52	56	64	72	80	96
Old Type 41	$\frac{1}{40}$	$\frac{1}{32}$	—	$\frac{3}{64}$	$\frac{1}{16}$	$\frac{5}{64}$	$\frac{3}{32}$	—	$\frac{1}{8}$	$\frac{5}{32}$	$\frac{3}{16}$	$\frac{13}{64}$	$\frac{7}{32}$	$\frac{1}{4}$	$\frac{9}{32}$	$\frac{5}{16}$	$\frac{3}{8}$
Old Type 31	0	1	—	2	3	4	5	—	6	—	—	—	—	—	—	—	—

* Size 15 is largest nozzle for COMET 2 cutting attachment.

AIR-FUEL GAS EQUIPMENT

HANDLE E4

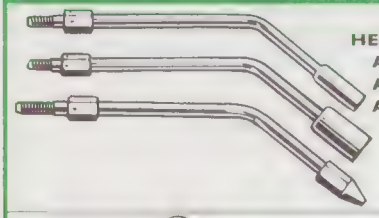
HANDLE D4
With Built-in Economiser
TA88



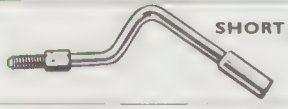
AIR-FUEL GAS EQUIPMENT

Small, light, comfortable to work with, COMWELD Type 581 air-acetylene and CIG-SIEVERT AIR-HANDIGAS equipment is completely portable. Used for brazing, heating, soldering, lead welding, paint burning and many other applications. E4 and D4 handles are for both air-HANDIGAS and air-acetylene. When required for acetylene a AT243 adaptor is necessary. The D4 handle has a built-in economiser which is operated by releasing the trigger at the handle. The working flame is immediately reduced to a pilot without having to touch the flame adjustment valve. Squeeze the trigger and the working flame is restored.

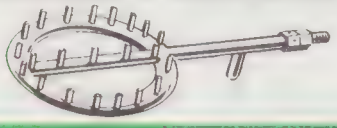
AIR-ACETYLENE Type 581



HEATING ATTACHMENTS:
AT16 — Type 581, size 56, 7.5cfh.
AT30 — Type 581, size 36, 1.5cfh.
AT185 — Type 581, size 96, 17cfh.



SHORT BENT HEATING ATTACHMENT:
AT49 — Type 581, size 56SB, 7.5cfh.



RING BURNER:
AT176—7cfh.

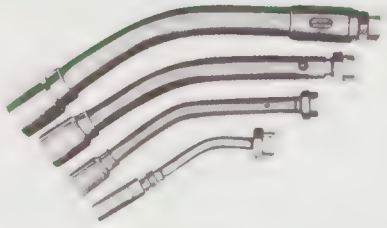
SOLDERING ATTACHMENT:
T167 — Type 581, size 36SA complete with AT54 soldering iron, 1.5cfh.

SOLDERING IRON ATTACHMENT:
Type 581, size 48SA.
TA9 — with 16 oz. (AT200) bit.
TA10 — with 12 oz. (AT201) bit.

PAINT BURNING ATTACHMENT:
AT35—Type 581, size 96, 12cfh.

HALIDE LEAK DETECTOR
T501—for locating leaks of refrigerant gases. 0.75cfh.

AIR-HANDIGAS CIG-SIEVERT



HEATING ATTACHMENTS

The four heating attachments illustrated, OSV 2952, OSV 2951, OSV 2950 and OSV 3937 are only part of the range of heating attachments. With an extension arm OSV 16221, 10 others can be attached.

AIR-HANDIGAS KITS

These kits are part of a much larger range of CIG-Sievert equipment, which includes such specialised plant as forges and gas leak detectors. All parts are interchangeable, and additional items may be added at any time.

PLUMBERS' KIT

OSV E4 Handle, OSV 2940, OSV 2941, OSV 2943 burners, OSV 15890 extension or OSV 2950, OSV 2951 and OSV 2952 neck tube burners.
OSV 3895 soldering attachment.

PAINTERS' KIT

OSV E4 handle, OSV 17065 paint removing burner, OSV 3937 fine burner.

HANDYMAN KIT

OSV E4 handle, OSV 2590, OSV 2951, OSV 2952 neck tube burners.

SOLDERING ATTACHMENT OSV 3845

Specially designed for production as well as general soldering.

PAINT BURNING ATTACHMENT OSV 17065

Gives a broad flat blowlamp for efficient paint removal.

COMWELD REGULATORS

LIGHTWEIGHT LP-GAS REGULATORS

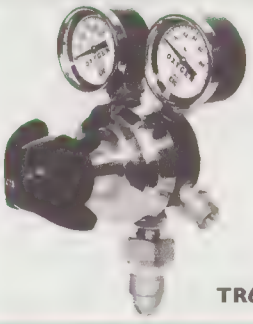
Give more gas from every cylinder, with larger flows and accurate control. Weight 18 oz.

TR13 — For use on CIG cylinders and cylinders with Domestic type LP-Gas threads. (CGA510 and POL.)

TR14—For use with Primus cylinders.

TR70—For use with Sievert cylinders.

TR13, TR14, TR70



COMPACT REGULATORS

Single stage with easy to read 2" Safety-back gauges. For general welding and cutting, the COMPACT regulator features greater flows and accuracy, more economy, simple repairs and greater safety.

Do-it-yourself replacement kits save time and money.

BULLNOSE SPIGOT AND NUT KIT: RG38 Oxygen; RG39 Acetylene.

FILTER KIT: RB43.

TR61 Oxygen, TR62 Acetylene

COMPACT DUAL STAGE REGULATORS

Designed to give sensitive control and slightly greater flows than from single stage COMPACT regulators by means of simple screw-in first stage capsule.

TR63 — Oxygen working pressures to 160 psi for machine cutting and flame gouging, flame hardening, etc.

TR94 — For air — working pressures up to 40 psi.

COMPACT LARGE FLOW REGULATORS

COMPACT LARGE FLOW REGULATORS give large flows of gas at constant pressures. Main applications are in large manifold distribution lines, flame hardening, heavy flame cutting, mechanised welding and foundry work.

TR92 — Oxygen working pressures up to 160 psi.

TR93 — Acetylene regulator for large heating applications and pipeline manifolds.

HIGH PRESSURE REGULATORS

Are used where pressures in excess of the range of TR63 regulators are required — for use with oxygen, nitrogen, air and hydrogen. When ordering, specify gas to be used to ensure the correct inlet connection is fitted.

TR85 Range — 0 to 400 psi.

TR86 Range — 0 to 1000 psi.

TR87 Range — 0 to 2500 psi — fitted with special extra high pressure inlet connection, for use with 3600 psi. supply.

COMPACT SINGLE STAGE REGULATORS

Side entry type with inlet connections to suit appropriate gas cylinder valves.

TR75 Hydrogen.

TR76 Ethylene

2" SAFETY BACK PRESSURE GAUGES

Fitted to all COMPACT regulators.

OXYGEN — black case

TG61—3000 psi.

TG62—120 psi.

TG65—100 psi.

ACETYLENE—maroon case

TG63—400 psi

TG64—30 psi.

OTHER GASES—gold case

TG75—3000 psi.	**TG80**— 60 psi.
TG77— 400 psi.	**TG95**—4000 psi.
TG78— 200 psi.	**TG96**— 500 psi.
TG79— 120 psi.	**TG97**— 50 psi.

GAUGE PROTECTORS

WA220. One pair, 2½", black, oxygen.

WA225. One pair 2", black, oxygen.

WA221. One pair 2½", maroon, fuel gas.

WA226. One pair 2", maroon, fuel gas.

OXYGEN PIPELINE REGULATOR

designed for use on pipelines having inlet pressures of 150-200 psi. Will pass large flows of oxygen. Used for deseaming applications in steelworks. **TR64.**

WATER REGULATOR

for controlling water pressure for flame hardening applications. Filter ensures that no foreign matter is carried into regulator. Pressures to 60 psi. **TR91.**

CO_2 REGULATORS

TR44 — TWIN REGULATOR, complete with two delivery and one contents gauge. Supplies two preset delivery pressures from the one supply. Stainless steel nozzles.

TR45—SINGLE REGULATOR, complete with delivery pressure gauge only. Supplies gas at preset delivery pressure. Stainless steel nozzles.

TR73—COMPACT SINGLE STAGE CO_2 REGULATOR, 60-psi delivery pressure gauge for inert gas welding. Safety relief device in diaphragm prevents excess pressures.

TR74—COMPACT SINGLE STAGE CO_2 REGULATOR similar to TR73 but fitted with 120 psi delivery pressure gauge.

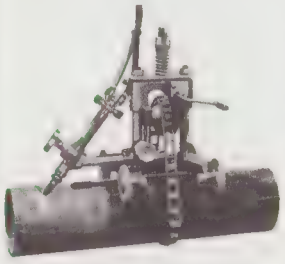
TR133 — COMPACT TWO STAGE CO_2 REGULATOR 60 psi delivery pressure gauge — 3000 psi cylinder capacity gauge.

CLIPPER PORTABLE CUTTING MACHINE — TAB 28/1

CLIPPER portable cutting machine is complete with blowpipe to take COMWELD Type 41 and 44 taper seat nozzles. With Type 41 and 44 Hi-speed nozzles the CLIPPER will cut 1" thick steel at a rate of 17" per minute. Maximum cutting thickness is 4". A radius bar enables the CLIPPER to cut circles from 3" to 45" diameter. At 19 lb. the CLIPPER is readily portable, yet it has exceptional traction and stability. Easily controlled for hand profiling with speed control and reversing switch readily accessible without moving hand from guide handle. Optional extra blowpipe kit XM314 available to allow twin blowpipe operation for bevel and land or plate splitting.

PIPE CUTTING MACHINES — TAB 14 AND TAB 22

The **TAB 14** COMWELD Portable Pipe Cutting Machine (illustrated) comes complete with blowpipe to take COMWELD taper seat nozzles Type 41 and 44. A hand operated machine, it cuts pipes, ranging from 4" to 24" diameter by adding or subtracting links from the chain supplied. Large diameter pipes can be cut by using additional lengths of chain. The TAB 14 gives a clean accurate cut with square or bevelled edge. Pipes can usually be welded without further preparation.



TAB 22 — Automatic Pipe Profiling and Cutting Machine. The TAB 22 handles all branch angles from 45° upwards, even pipes of unequal size. The machine will automatically flame cut all pipes with an outside diameter of between 2" and 9½". Only one cam is required to cut a given branch angle in any diameter pipe. A semi-self centering chuck grips the pipe which is rotated by a variable speed drive.

COMWELD WELDING AND BRAZING FLUXES

	Part Number	Standard Pack		Part Number	Standard Pack
Aluminium Flux	XF47	4 oz. tin	Stainless Steel Flux	XF58	12 oz. tin
Aluminium Brazing Flux	XF63	4 oz. jar	Silver Brazing No. 1	XF52	4 oz. jar
Aluminium Bronze Flux	XF48	4 oz. tin		XF64	1 lb. jar
Bronze Flux	XF 7	8 oz. tin	Silver Brazing No. 2	XF53	4 oz. jar
	XF68	6 lb. tin		XF65	1 lb. jar
Bronze Tinning Flux	XF55	12 oz. tin	Silver Brazing No. 3	XF57	4 oz. jar
Castinux Flux	XF70	4 oz. tin		XF66	1 lb. jar
Cast Iron Flux	XF 8	12 oz. tin	Silver Brazing 965	—	—
Copper and Brass Flux	XF36	8 oz. tin	Vapaflux	XF60	6 pt. tin
	XF67	6 lb. tin		XF62	Iron Powder
Magnesium Flux	XF37	4 oz. tin			

COMWELD WELDING RODS

ALUMINIUM AND ALUMINIUM ALLOYS

ROD	Colour Marking	Size	Part Number	Standard Pack
Pure Aluminium AS B29 62	Brown	1/16"	XR2	5 lb.
		3/32"	XR173	5 lb.
		1/8"	XR3	5 lb.
		3/16"	XR4	5 lb.
		1/4"	XR5	5 lb.
Aluminium Silicon No. 5 AS B29 68	Green	1/16"	XR39	5 lb.
		1/8"	XR48	5 lb.
		5/32"	XR246	5 lb.
		3/16"	XR49	5 lb.
		1/4"	XR50	5 lb.
		1/16"	XR101	5 lb.
Aluminium Silicon No. 10 AS B29 84	Yellow	3/32"	XR208	5 lb.
		1/8"	XR95	5 lb.
		3/16"	XR103	5 lb.
		1/4"	XR104	5 lb.
		1/16"	XR250	—
Aleubraze AS B29 85	Blue	3/32"	XR248	—
		1/8"	XR251	—
Aluminium 5% Magnesium AS B29 78	White	3/32"	XR383	5 lb.
		1/8"	XR384	5 lb.

BRAZE WELDING ALLOYS

Austral Hi-Bond Manganese Bronze 404 AS B29 C4	Green	1/16"	XR13	10 lb.
		3/32"	XR206	10 lb.
		1/8"	XR14	10 lb.
		3/16"	XR15	10 lb.
		1/4"	XR16	10 lb.
		5/16"	XR212	10 lb.
		1/8"	XR216	10 lb.
Nickel Bronze 904 AS B29 C5	Brown	3/16"	XR217	10 lb.
		1/4"	XR218	10 lb.

CAST IRON

ROD	Colour Marking	Size	Part Number	Standard Pack
Standard Cast Iron (Super Silicon) AS B29 B1	Blue	3/16"	XR43	—
		1/4"	XR44	—
		3/8"	XR46	—

COPPER AND COPPER ALLOYS

Austral Copper 105 AS B29 C1	Orange	1/8"	XR78	10 lb.
		3/16"	XR79	10 lb.
		1/4"	XR80	10 lb.
Austral Copper 106 AS B29 C1 Si	Blue	1/8"	XR232	10 lb.
		3/16"	XR233	10 lb.
		1/4"	XR234	10 lb.
		1/16"	XR7	10 lb.
Austral Tobin Bronze 211 AS B29 C2	White	3/32"	XR207	10 lb.
		1/8"	XR18	10 lb.
		3/16"	XR19	10 lb.
		1/4"	XR20	10 lb.
Aluminium Bronze ASTM B259-R CuA_1A_2	Black	1/8"	XR209	—
		3/16"	XR210	—
Monel 40 ASTM B304-R N40		16G	XR107	—
		10G	XR57	—
Austral BRZ 213 BS1845 Type 8		1/8" sq.	XR170	10 lb.
		3/16" sq.	XR171	10 lb.
		1/4" sq.	XR172	10 lb.
Austral Cusilman 801 AS B29 C9	Yellow	1/16"	XR150	10 lb.
		1/8"	XR147	10 lb.
		3/16"	XR148	10 lb.
Phos Copper BS1845 Type 7	Crimson	1/8"	XR22	10 lb.
		3/16"	XR23	10 lb.

COMWELD WELDING RODS

MILD STEEL AND WROUGHT IRON

ROD	Colour Marking	Size	Part Number	Standard Pack
Mild Steel AS B29 A1		1/16″	XR69	—
		3/32″	XR159	—
		1/8″	XR70	—
		3/16″	XR73	—
		1/4″	XR96	—

CARBON AND ALLOY STEELS

ROD	Colour Marking	Size	Part Number	Standard Pack
High Test AS B29 A2	Copper Coated	1/16″	XR82	—
		3/32″	XR83	—
		1/8″	XR93	—
		3/16″	XR97	—
		1/4″	XR137	—
		1/16″	XR131	—
Super Steel AS B29 A3	Copper Coated Blue Tip	1/8″	XR108	—
		3/16″	XR109	—
		1/4″	XR126	—
Nickel Steel	Red	12G	XR35	—
		10G	XR36	—
		8G	XR37	—
Silver Steel	Yellow	1/16″	XR51	—
		1/8″	XR52	—
		3/16″	XR53	—
		3/32″	XR245	—
Carbon Molybdenum AS B29 A6	Blue	1/8″	XR235	—
		5/32″	XR236	—
		3/16″	XR237	—
Stainless Steel 18/8/1 AS B29 A8 Nb	White	1/16″	XR134VK	—
		3/32″	XR164VK	—
		1/8″	XR174VK	—

SILVER BRAZING ALLOYS

ROD	Colour Marking	Size	Part Number	Standard Pack
Silver Brazing Alloy 102	Yellow	1/8″	XR279	5 lb.10 lb.
Silver Brazing Alloy 105 ASTM B260 B Cu P-3	Silver	.085″	XR285E	5 lb.
Silver Brazing Alloy 115 ASTM B260 B Cu P-5	Brown	.085″	XR139E	5 lb.
		3/32″	XR14OE	5 lb.
		1/8″	XR141E	5 lb.
Silver Brazing Alloy 235 ASTM B206 B Ag-2	White	1/16″	XR256E	1 lb.
		3/32″	XR257E	1 lb.
Silver Brazing Alloy 245 ASTM B260 B Ag-1	Dark Blue	1/16″	XR253E	1 lb. 5 lb.
		3/32″	XR254E	1 lb. 5 lb.
		1/8″	XR255E	1 lb. 5 lb.
		Shim	XR267	
Silver Brazing Alloy 250 ASTM B260 B Ag-1A	Light Blue	1/16″	XR156E	1 lb.
		3/32″	XR155E	1 lb.
		1/8″	XR157E	1 lb.
		Shim	XR176	
Silver Brazing Alloy 2503 ASTM B260 B Ag-3	Black	1/16″	XR259E	1 lb.
Silver Brazing Alloy 333	Orange	1/16″	XR125E	1 lb.
Silver Brazing Alloy 350 ASTM B260 B Ag-6	Green	1/16″	XR263E	1 lb.
Silver Brazing Alloy 360 BS1845 Type 4	Grey	1/16″	XR266E	1 lb.
Silver Brazing Alloy 472 ASTM B260 B Ag-8	Red	1/8″	XR247E	1 lb.
Silver Brazing Alloy 965			XR98	1 lb. Reel
			XR99	5 lb. Reel

Hard Facing Rods Also Available

COMWELD ACCESSORIES

SPANNERS

WA202-XA39
WA168-R60

WA202 — Spanner for COMET JUNIOR blowpipe nozzle and tubing connections.

XA39 — Cylinder key for use with gas cylinder valves.

WA168 — Universal spanner for Type 40 taper seat and Type 30 one-piece nozzles.

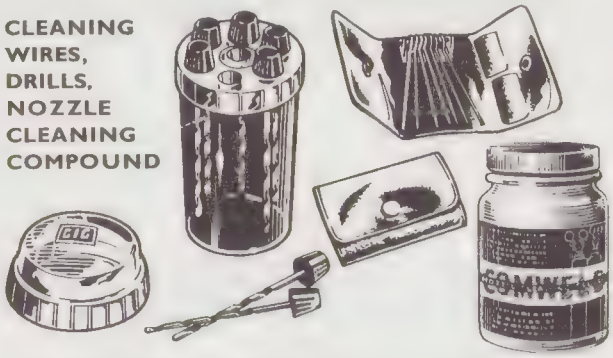
R60 — Regulator bullnose spigot nut and tubing connection spanner.

XL1

FLINT LIGHTER
XL1 —Metal cup type,
XL5 — Box of 10 flints for XL1.

HANDY CLAMP
XA20

CLEANING WIRES, DRILLS, NOZZLE CLEANING COMPOUND



CLEANING WIRES — TC53. Universal tip and nozzle cleaners. Set of 11 in plastic wallet. Suits all welding tips.

CLEANING DRILLS — for cleaning nozzle holes.

TC44 — Type 34 HANDIGAS cutting nozzles — Sizes 8, 12, 15 and 20.

TC45 — Type 41 taper-seat and Type 31 one-piece acetylene cutting nozzles — Sizes 8, 12 and 15.

TC46 — Type 551 acetylene welding tips — Sizes 8, 10, 12, 15, 17, 21 and 26.

TC49 — Type 41 taper-seat and Type 31 acetylene cutting nozzles — Sizes 20, 24 and 32.

TC52 — Type 44 HANDIGAS taper-seat nozzles — Sizes 8, 12, 15, 20, 24 and 32.

XF73 — Nozzle cleaning compound for removal of slag and dirt from nozzles.

TUBING CONNECTIONS

LP112 Right Hand Thread
LP240 Left Hand Thread

COMPLETE TUBING CONNECTIONS — $\frac{3}{8}$"18 UNF threads.

LP112 — $\frac{1}{4}$" bore tubing, RH thread.
LP240 — For $\frac{1}{4}$" bore tubing, LH thread.

LP105 Right HandThread
LP239 Left Hand Thread
LP137 Right Hand Thread
LP242 Left Hand Thread

COMPLETE TUBING CONNECTIONS — $\frac{3}{8}$"-18 UNF thread.

LP105 — For $\frac{1}{4}$" bore tubing, RH thread.
LP239 — For $\frac{1}{4}$" bore tubing, LH thread.
LP137 — For $\frac{3}{8}$" bore tubing, RH thread.
LP242 — For $\frac{3}{8}$" bore tubing, LH thread.

TUBING COUPLINGS

WB34 Right Hand Thread
WB35 Left Hand Thread

TUBING CONNECTION COUPLING — will suit all size tubing connections with $\frac{3}{8}$"18 UNF thread.

WB34 — RH.
WB35 — LH.

LP106
LP210

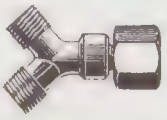
LP106 — $\frac{1}{4}$" tubing couplings. As per LP114 but less taper sleeves.

LP210 — $\frac{3}{8}$" tubing couplings. As per LP211 but less taper sleeves.

LP114
LP211

LP114 — Tubing coupling for $\frac{1}{4}$" bore tubing, complete with 2 x LP93 taper sleeves.

LP211 — Tubing coupling for $\frac{3}{8}$" bore tubing, complete with 2 x LP136 taper sleeves.

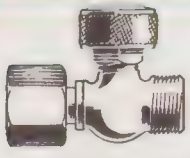


R121 Right Hand Thread
R215 Left Hand Thread

R121 — Y-piece adaptor for regulators, $\frac{3}{8}$-18 UNF connections.

R215 — Y-piece adaptor for regulator outlet, LH thread, $\frac{3}{8}$"18 UNF.

CONTROL VALVES

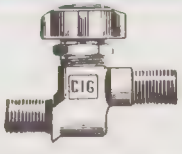


TJ39 Right Hand Thread
TJ40 Left Hand Thread

CONTROL VALVES

With $\frac{3}{8}$"18 UNF connections and $\frac{7}{32}$" ways.

TJ39 — RH thread. **TJ40** — LH thread.

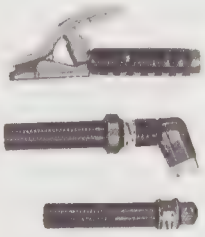


TJ17 Right Hand Thread
TJ18 Left Hand Thread

CONTROL VALVES
With $\frac{3}{8}$"18 UNF connections and $\frac{7}{32}$" ways, male connections. Capacity up to 250cfh.

TJ1 7— RH thread. **TJ18** — LH thread.

EMF ARC WELDING ACCESSORIES



ELECTRODE HOLDERS

VB898 — Electrode holder, Type MW300, for currents up to 300 amp.
VB1141 — Electrode Holder, Type 400 amp.
VB612 — Electrode holder, Type B, for currents up to 300 amp.
VB785/2 — Electrode holder, Heavy Duty, for currents up to 500 amp.
VB807 — Electrode holder, Type SM, for currents up to 150 amp.

KP294 — **CHIPPING HAMMER**, for removing slag from weld surface.

FILLET GAUGE

VB189 — Fillet gauge to measure size of fillet weld. Supplied complete with leather pouch.

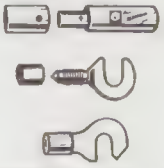
CLAMPS

VB155 — Work clamp, Tong type.

VB808 — Work clamp, Type SM.

KP301 — Work clamp, Alligator type.

VB761 — Work clamp, 'G' type.



CABLE CONNECTORS—LUGS

VB755 — Cable connector, plug-in type.
VB804 — Cable lug, mechanical connection.
VB171 — Cable lug, solder connection.

L221 **WELDING LEAD**
Length 15'. Complete with Lug and Electrode Holder. 260, 360 or 500 AMP.

L222 **WELDING LEAD CABLE**
260, 360 or 500 AMP.
Cut to lengths as required.

L223 **EARTH LEAD**
Length 15'. Complete with Lug and Standard Earth Clamp. 260 or 360 AMP.

L224 **EARTH LEAD CABLE**
260, 360, 500 AMP.
Cut to length as required.

ARC WELDING MACHINE ACCESSORY KITS

No. 1 — VB799
No. 1A — VB 809
No. 1B — VB1317
No. 2 — VB830
No. 2B — VB842
No. 3 — VB810
No. 3A — VB1090

COMWELD ACCESSORIES

CYLINDER TRUCKS

Cylinder Trucks for two cylinders.
XT1 — Truck with steel wheels.
XT1R — Truck with rubber wheels.
TJ30 — Small cylinder truck — holds 100 cu. ft. acetylene and 120 cu. ft. oxygen cylinders, and HANDIGAS cylinder for decanting.

GAS GASAVER TJ45

Gas Gasaver eliminates gas wastage in a simple way. Operator hangs blowpipe on Gasaver arm and gas supply is automatically cut off. When lifted off again, the gas supply switches on and blowpipe can be lit from pilot flame on the Gasaver. Gas controls do not have to be adjusted each time the blowpipe is lit. Saves gas and operator's time.

E.M.F. ARC WELDING MACHINES

TRANSARC TRADESMAN

- Runs 8 gauge electrodes.
- Three models specifically designed for 240V, 415V or 480V input.

SPECIFICATIONS

TYPE: Leakage reactance, moving coil, convection cooled transformer.

OUTPUT

Low Current Range:	50 to 140 amp 71 volts open circuit		
High Current Range:	65 to 190 amp 50 volts open circuit		
RATED OUTPUT:	180 amp 27 load volts 30% duty cycle 190 amp 27 load volts 27% duty cycle		
INPUT (50 c/s, 1 ph, a.c.)	TAD 148	TAD 151	TAD 152
Rated Input Voltage	240	415	480
Rated Input Current*	25 amp	14 amp	13 amp
Max. Short Circuit Input Current*	59 amp	34 amp	29 amp
WEIGHT:	180 lb.		
DIMENSIONS:	Height 25½" (33½" including handle) Width 14" (17½" including wheels) Depth 18½" (20" including wheels)		

*Uncorrected

TRANSARC 300

- Runs up to ¼" in conventional mild steel, 8 gauge full iron powder and 6 gauge low hydrogen electrodes.

SPECIFICATIONS

TYPE: Leakage reactance, moving coil, convection cooled transformer.

OUTPUT

Low Current Range:	85 to 250 amp 78 volts open circuit		
High Current Range:	115 to 330 amp 54 volts open circuit		
RATED OUTPUT:	300 amp 32 load volts 30% duty cycle 330 amp 33 load volts 25% duty cycle		
INPUT (50 c/s, 1 ph. a.c.)	TAD 143	TAD 144	
Rated Input Voltage	415	440	480
Rated Input Current*	26 amp	24 amp	22 amp
Max. Short Circuit Input Current*	68 amp	64 amp	60 amp
WEIGHT:	300 lb.		
DIMENSIONS:	Height 20"/Width 14½"/Depth 22"		

*Uncorrected

TRANSARC HD300 TAD 86

- Rated 300 amp 60% duty cycle to AS.C97-1964 for heavy manual arc welding applications.
- Runs all electrode types, including conventional mild steel, iron powder and low hydrogen from 12 gauge to $\frac{5}{16}$" diameter.

SPECIFICATIONS

TYPE: Leakage reactance, moving coil, fan assisted-convection cooled transformer.

OUTPUT:

High Current Range:	140 to 450 amp 73 volts open circuit
Low Current Range:	55 to 150 amp 78 volts open circuit
RATED OUTPUT:	232 amp 29 load volts 100% duty cycle 300 amp 32 loads volts 60% duty cycle 450 amp 38 load volts 25% duty cycle
INPUT:	
Supply Required:	415 volts, a.c. 50 c/s, single phase
Rated Input Current:	45 amp (uncorrected)
Maximum Short Circuit Input Current:	120 amp (uncorrected)
DIMENSIONS:	Height 30"/Width 21"/Depth 32"
WEIGHT:	375 lbs. (unpacked) 390 lbs. (packed — shipping weight)

TRANSARC HD400 TAD87

- Rated 400 amp 60% duty cycle to AS.C97-1964 for heaviest manual welding.
- Rated 310 amp 100% duty cycle for automatic welding.
- Runs all electrode types up to ⅜" in at high duty cycles.

SPECIFICATIONS

TYPE: Moving coil, leakage reactance transformer with forced air cooling.

OUTPUT:

High Current Range:	140 to 560 amp 75 volts open circuit
Low Current Range:	57 to 180, 77 volts open circuit
RATED OUTPUT:	310 amp 32 load volts 100% duty cycle 400 amps 36 load volts 60% duty cycle 560 amp 42 load volts 25% duty cycle
INPUT:	
Rated Input Current:	61 amp (uncorrected)
Maximum Short Circuit Input Current:	162 amp (uncorrected)
Supply Required:	415 volts, a.c. 50 c/s single phase
DIMENSIONS:	Height 30"/Width 21"/Depth 32"
WEIGHT:	400 lbs. (approx.) unpacked 410 lbs. (approx.) shipping weight

Other Machines available include:

TAD1 "Pilot" Arc Welder for 16G to 8G Electrodes.
TAD55 Rotarc 250 for Power Take-off Drives.
TAD17. DC Arc Welder for Electrodes up to 6G.

TRANSARC HANDI TAD 155

SPECIFICATIONS

TYPE: Leakage reactance, convection cooled, fixed output transformer.

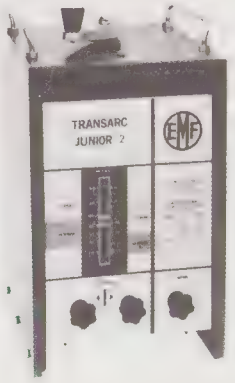
INPUT

Rated Input Voltage:	220/240 volt, 50 cycle, single phase a.c.
Rated Input Current:	12 amp (uncorrected)
Recommended Supply Fuse:	15 amp Fuse
Dimensions:	Width 11"/Height 9"/Depth 9"

ELECTRODE CAPACITY:

10 Gauge Tap:	10 gauge mild steel rutile and medium iron powder electrodes.
12 Gauge Tap:	12 gauge mild steel rutile, cellulose, medium iron powder and selected rutile, stainless steel, cast iron and copper alloys.

TRANSARC JUNIOR TAD 159 A.C.



SPECIFICATIONS

TYPE: Leakage reactance type transformer arc welder with stepless current control through two overlapping amperage ranges. Range selection by separate output terminals. Convection air cooled.

INPUT	220-250 Volts, 50 cycles
Primary Demand:	3.6 kVA, 15 amps
Amperage Range:	A: 30-65 amps (16-14 gauge electrodes) B: 50-130 amps (12-10 gauge electrodes)
Open Circuit Voltage:	A: 78 volts, B: 45 volts
Duty Cycle:	May be used continuously for manual welding without fear of damage
Weight:	95 lbs.

ARC WELDING ELECTRODES

GROUP 1. MILD STEEL ELECTRODES	Gauge	Lb. Per Pkt.
	*$\frac{3}{8}$"	12½
	$\frac{5}{32}$"	10
	$\frac{1}{16}$"	10
	$\frac{1}{4}$"	10
ARCRAFT	4	10
Easy running general purpose rutile type electrode for all position mild steel welding. AC or DC.	5	10
	6	10
	8	10
CLASSIFICATION Approval — Lloyds	10	10
AWS/ASTM E6013 AS. B130-217 BS. 1719-E207	12	10
	13	10
	14	5
	16	5
WELDCRAFT	4	10
High quality all position rutile type electrode especially suited to vertical and overhead welding. AC or DC.	6	10
	8	10
CLASSIFICATION Approval — Lloyds	10	10
AWS/ASTM E6013 AS. B130-317 BS. 1719-E317	12	10
	14	5
ALLCRAFT		
Rutile type electrode producing viscous slag for maximum ease in all positions. AC or DC.	4	10
	6	10
CLASSIFICATION Lloyds Pending	8	10
AWS/ASTM E6012 AS. B130-217 BS. 1719-E207	10	10
	12	10
PIPECRAFT 6010		
Cellulose type electrode for welding mild steel in all positions using DC power supply.	6	10
	8	10
CLASSIFICATION Approval — Lloyds	10	10
AWS/ASTM E6010 AS. B130-110P BS. 1719-E100P	12	10
CRAFT 10		
Heavy coated rutile type electrode producing mitre fillet welds in flat and oblique positions. AC or DC.	4	10
	6	10
CLASSIFICATION	8	10
AWS/ASTM E6013 AS. B130-317 BS. 1719-E317	10	10
FERROCRAFT 11		
Cellulose base iron powder electrode for use in all positions using either AC or DC.	6	10
	8	10
CLASSIFICATION Approval — Lloyds	10	10
AWS/ASTM E6011 (IP) BS. 1719-106P AS. B130-116P	12	10
FERROCRAFT 21		
A medium iron powder rutile type electrode for fast all position welding. AC or DC.	4	12½
	6	10
CLASSIFICATION	8	10
AWS/ASTM E6014 AS. B130-217 (IP) BS. 1719-207J	10	10
	12	10

	Gauge	Lb. Per Pkt.
FERROCRAFT 22	$\frac{1}{4}$"	12½
Full iron powder rutile type electrode for highest welding speeds in flat and horizontal positions. AC or DC.	5	12½
	6	12½
CLASSIFICATION Approval — Lloyds	8	10
AWS/ASTM E6024 AS. B130-227 (IP) BS. 1719-E227K	10	10
FERROCRAFT 42	12	10
Full iron powder iron oxide type electrode for butts, fillets, and deep groove joints in flat, oblique, horizontal positions, rapid slag removal X-ray quality weld metal. AC or DC.	4	12½
	6	12½
	8	10
CLASSIFICATION Approval — Lloyds	10	10
AWS/ASTM E6027 AS. B130-426 (IP) BS. 1719-E426K		
FERROCRAFT GR27		
Full iron powder, iron oxide type electrode for butt welds in flat position and fillet welds in the flat and oblique positions. Specially designed for the Gravity Welding Machine. AC or DC.	3	25
	5	25
	6	25
CLASSIFICATION Approval — Lloyds		
AWS/ASTM E6027 GRADE 3		
STEELCRAFT	*4	10
Rutile type mild steel electrode for high production welding. AC or DC.	6	10
	8	10
CLASSIFICATION Approval — Lloyds	10	10
AWS/ASTM E6013 AS. B130-247 BS. 1719-E247	*12	10
N.E.S.R.		
Heavy coated mild steel electrode producing an inflated honeycomb slag. Radiographic sound weld metal, full root penetration.	4	10
	6	10
	8	10
CLASSIFICATION Approval — Lloyds	10	10
AWS/ASTM E6020 AS. B130-436 BS. 1719-E426		
X.O.X.		
Lightly coated iron oxide electrode especially developed for sheet metal welding.	12	10
	14	10
CLASSIFICATION		
AWS/ASTM E4520 AS. B130-517 BS. 1719-E507		
SULFAROD		
For all position welding of sulphur bearing mild steel containing up to 0.3% sulphur	8	10
CLASSIFICATION	10	10
AWS/ASTM E6013 AS. B130-217 BS. 1719-E207	12	10

*** Available only to Individual Order Ex Factory.**

ARC WELDING ELECTRODES

GROUP 2. LOW HYDROGEN AND ALLOY ELECTRODES

	Gauge	Lb. Per Pkt.
MULTICRAFT		
Low hydrogen electrode for welding high tensile steels. Weld metal 35-38 T.S.I.	4	10
	6	10
CLASSIFICATION Approval — Lloyds	8	10
AWS/ASTM E7016 AS. B130-616 BS 1719-E606H	10	10
	12	10
MULTICRAFT LT	*4	10
Low hydrogen electrode depositing 30-33 T.S.I. weld metal.	*6	10
CLASSIFICATION	*8	10
AWS/ASTM E6016 AS. B130-616 BS. 1719-E606H	*10	10
FERROCRAFT 61		
Low hydrogen iron powder electrode depositing 35-38 T.S.I. weld metal. Excellent out of position operation characteristic.	4	10
	6	10
CLASSIFICATION Approval — Lloyds	8	10
AWS/ASTM E7018 AS. B130-616 (IP) BS. 1719-E606JH	10	10
	12	10
FERROCRAFT 61 LT		
Low hydrogen iron powder electrode depositing 31-34 T.S.I. weld metal. Especially suitable for welding heavy walled pressure vessels, storage tanks and surgetanks.	4	10
	6	10
	8	10
CLASSIFICATION	10	10
AWS/ASTM E6018 AS. B130-616 (IP) BS. 1719-E606JH	12	10
MULTICRAFT DUALCOAT		
Especially designed for butt welds in small diameter pipe where backing rings are not used.	12	10
CLASSIFICATION Approval — Lloyds		
AWS/ASTM E7016 A1 AS. B130-616 BS. 1719-E606H		
PIPECRAFT 7010		
High cellulose type. All positions. D.C. supply, reverse polarity. For welding all diameter high tensile pipe lines.	*6	10
	*8	10
CLASSIFICATION Approval — Lloyds	*10	10
AWS/ASTM E7010 GRADE 3	*12	10

GROUP 3. HARD FACING AND SPECIAL ELECTRODES

HARDCRACT 250	4	10
(Conventional Rutile Type).	6	10
Smooth running electrode deposing tough air hardening alloy steel 250-300 D.P.N. AC or DC	8	10
	10	10
HARDCRAFT 250	4	10
(Iron Powder Rutile Type).	6	10
Smooth running electrode depositing tough air hardening alloy steel 250-300 D.P.N. AC. or DC.	8	10
	10	10
	12	10
HARDCRAFT 350	4	10
(Conventional Rutile Type).	6	10
Smooth running electrode depositing tough air hardening alloy steel 350-400 D.P.N. AC or DC.	8	10
	10	10
HARDCRAFT 350	4	10
(Iron Powder Rutile Type)	6	10
Smooth running electrode depositing tough air hardening alloy steel 350-400 D.P.N. AC or DC.	8	10
	10	10
	12	10
HARDCRAFT 650	4	10
(Conventional Lime/Fluorspar Type).	6	10
Smooth running electrode 650 D.P.N. Hard alloy steel for severe abrasions moderate impact. AC or DC.	8	10
	10	10
HARDCRAFT 650	4	10
(Iron Powder Rutile Type)	6	10
Smooth running electrode 650 D.P.N. Hard alloy steel for severe abrasions moderate impact, AC or DC.	8	10
	10	10
HARDCRAFT 850	4	10
Lime type high carbon-chromium electrode 850 D.P.N. Extreme abrasion, moderate impact. AC or DC.	6	10
	8	10
	10	10
HARDCRAFT C	$\frac{3}{16}$"	10
High carbon and chrome tubular "Chrome Carbide" electrode for heavy impact and severe abrasion.	$\frac{1}{4}$"	10
	$\frac{5}{16}$"	10
	$\frac{7}{16}$"	10
ABRASOCRAFT	4	10
Lime/Fluorspar electrode depositing semi-austenitic work hardening steel 300-350 to 550-600 D.P.N. Abrasion with heavy impact. AC or DC.	6	10
	8	10
	10	10
MANGCRAFT A	*$\frac{1}{4}$"	10
Smooth running lime type electrode depositing 14% manganese steel AC or DC.	6	10
	8	10
TOOLCRAFT	6	10
Multi-purpose rutile type electrode of the martensitic type. For cutting tools and high resistance to abrasion, wear and shock. 650-750 D.P.N. AC or DC.	8	5
	10	5
	12	5
STAINCRAFT 308-R (AUSTEROD)	4	10
For making strength welds and "buttering" austenic 14% Mn and Ni-Mn steels.	6	10
	8	10
	10	10

GROUP 4. ELECTRODES FOR WELDING STAINLESS AND HEAT RESISTING STEELS

	Gauge	Lb. Per Pkt.
STAINCRAFT 308-R (AUSTEROD)	4	10
Smooth running rutile type electrode depositing 18-8 type austenic stainless steel weld metal. AC or DC.	6	10
	8	10
CLASSIFICATION Quality	10	10
AWS/ASTM E308-16 BS. 2926-A AWS/ASTM (A298-62T)		
STAINCRAFT 318-R (STAINCRAFT Mo/Cb Rutile)	6	10
Rutile type stainless electrode depositing 18-8 austenitic weld metal containing 2.5% Mo 0.5% Cb.	8	10
	10	5
CLASSIFICATION Quality	12	5
AWS/ASTM E318-6 BS. 2926-D	14	5
	16	5
STAINCRAFT 318-L (STAINCRAFT Mo/Cb Lime)	8	10
Lime type stainless electrode depositing same metal as 318-R but sometimes preferred for out of position welding.	10	5
	12	5
CLASSIFICATION	14	5
AWS/ASTM E318-15 BS. 2926-D	16	5
STAINCRAFT E347-R (STAINCRAFT Cb Rutile)	8	10
Rutile type electrode depositing 18-8 austenitic weld metal containing 0.8% columbium.	10	5
	12	5
CLASSIFICATION	14	5
AWS/ASTM E347-16 BS.2926-A		

GROUP 5. ELECTRODES FOR WELDING CAST IRON

CASTCRAFT	6	10
For machinable non-ferrous welds on cast iron, particularly Ni-resist or other austenitic cast irons.	8	5
	10	5
	12	5
CASTCRAFT 55	8	5
A Nickel-Iron alloy electrode for machinable welds in cast iron, particularly malleable and S.G. types.	10	5
CASTCRAFT 100	8	5
For machinable non-ferrous welds on grey, malleable and austenitic cast irons and meehanite.	10	5

GROUP 6. ELECTRODES FOR WELDING NON-FERROUS METALS

BRONZECRAFT AC-DC	6	5
AC-DC electrode for welding copper base alloys other than those containing lead.	8	5
	10	5
MONELCRAFT	10	5
Especially designed for welding monel metal. Strong ductile welds having high resistance to corrosion.	12	5
ALUMINIUM	8	90
Non-ferrous electrode depositing a 10% silicon aluminium alloy, suitable for welding aluminium and the majority of aluminium base alloys. (Supplied in sealed tins.)	10	100
	12	125

GROUP 7. ELECTRODES FOR ARC CUTTING METAL

CUTTING ROD	8	10
Removing runners and headers from stainless and heat resisting steel castings, cutting stainless steel sheet, risers on non-ferrous castings and many mild steel applications.	10	10

Also Available

GROUP 6. Electrodes for Welding Non-Ferrous Metals.

GROUP 7. Electrodes for Arc Cutting Metal.

TYPICAL CARTON PACKAGING

	Approximate lbs. per Carton								
Gauge —	$\frac{1}{4}$"	4	5	6	8	10	12	14	16
Standard Mild Steel	90	80	90	90	90	90	80	70	60
Ferrocraft Series	75	75	75	75	80	80	70		
Staincraft Series				70	70	70	70	70	70
Hardsurfacing		80		80	90	90			
Castcraft Series				90	75	75	80		

*** Available only to Individual Order Ex Factory.**

WELDING HELMETS AND HANDSHIELDS

No. WH150-L Black Fibre Welding Helmet. Reinforced fire resistant nylon "Lift Front" lens holder.

No. WS 156-Y Black Fibre Lightweight Handshield. "Flat-Front" wide shell with rounded corners and insulated inside handle. Fitted with semi-flush "quick change" lens holder.

No. WH162-F Fibreglass Welding Helmet with "Fixed" nylon lens holder, long shell.

No. WS162-M Fibreglass Welding Shield, "moulded-in" lens holder. Long-shell for added protection particularly for overhead welding.

No. WH160-L Fibreglass Welding Helmet, short-shell with Nylon "Lift Front" lens holder.

No. WS152-F Black Fibre Handshield, deep extended length, straight front shell.

No. WGH150-L Hat'n Shield Combination Black fibre shield with "Lift Front" Nylon Excutcheon and "Safeguard" Cap.

WH160-M Fibreglass Welding Helmet, short-shell with "moulded-in" lens holder, 15½ oz. complete.

No. WHSA160-L Supplied Air Welding Helmet illustrates No. WH160L Welding helmet with air supply attachment. For use when welding stainless steel, galvanised iron, etc. or where excessive fume is a hazard.

All "TECTOR-WELD" (TW) Filters comply with Standards and carry the British Standard "Kite" Mark Certificate of continuing quality.

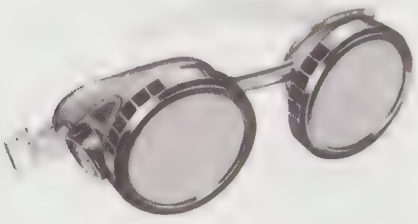
PROTECTIVE FILTERS FOR ELECTRIC WELDING

DESCRIPTION OF OPERATION	Approximate Range of Welding Current Amperes	Australian Class. Shade No.	British Class. Shade No.	American Class.
Metal-arc welding (coated electrodes). Continuous covered-electrode welding. Carbon dioxide shielded continuous covered-electrode welding.	Up to 100 100–300 Over 300	8–9 10–11 12–13 14	8–9 10–11 12 13 14	8–9 (30–75 amps.) 10–11 (75–200 amps.) 12–13 (200–400 amps.)
Automatic carbon dioxide shielded metal-arc welding ..	Over 500	15 16	15 16	
Plasma Cutting		16		
Inert-gas tungsten-arc welding (TIG)	Up to 15 15 75 75–100 100–200 200–250 250 300	8 9 10 11 12 13 14	8–9 8–9 10–11 10–11 12–13 12 13 14	8–9 (30–75 amps.) 8–9 (30–75 amps.) 8–9 (75–200 amps.) 10–11 (75–200 amps.) 12–13 (200–400 amps.) 12–14 (200–400 amps.)

IMPERIAL WELDING GOGGLES

- Rugged, non-inflammable, heat resistant cups.
- Indirectly ventilated to prevent light leaks from any angle.
- Deep, free-turning lens rings for easy lens replacement.
- Broad facial contact areas for comfortable fit.
- Adjustable nose bridges and head bands.
- Styled to fit over spectacle frames.

Manufactured to comply with Australian Standard Z45, British Standard No. BS679, and American Standard No. GGG-G-513. Fitted with "Tectorweld" Welding Filters.

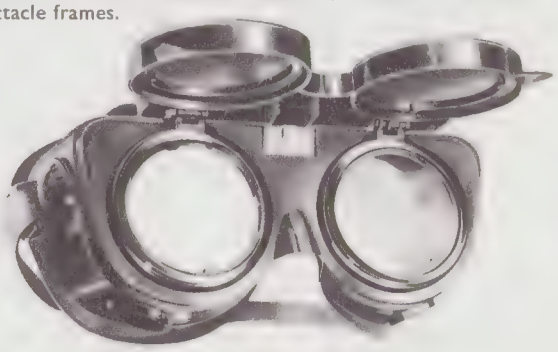


No. GW01. Lightweight welding goggle with individual eyecups and plastic-covered adjustable chain bridge.

No. GW10 "Imperial" Wide angle Cover-all, to accommodate spectacle frames.

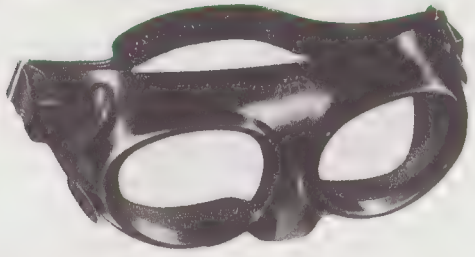
No. GWB10 "Imperial" Cover-all Bridge bar may be adjusted for positive fit and position. One hand only needed to lift goggle.

No. GWR24 "RAYFLEX" Lightweight, opaque green P.V.C. frame. Single wide-vision "Plastiweld" lens. Suited for assistants. Available in lens shades 4, 5 and 6. Fits over spectacle frames.

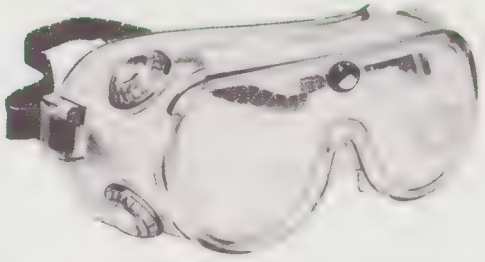


"FLIP-UP" WELDING GOGGLES.
Enable work to be inspected by simply flipping up hinged portion with cover lenses and filters. When hinged portion is raised, eyes remain protected by clear lenses. Fits over prescribed spectacles.
GWL40 – Shade 5 Solid Filters.

CHEMICAL AND DUST GOGGLES



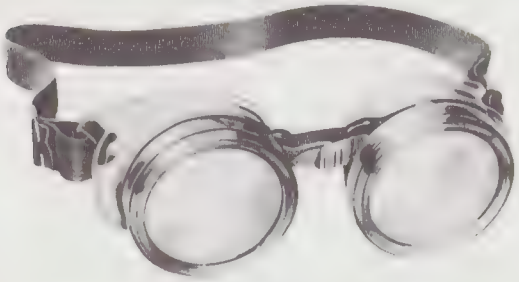
No. GCF89 "CHEMOFLEX". One-piece acid or chemical safety goggles made from supersoft "P.V.C." for comfort and safety. Lightweight, transparent frame, can be worn over prescription spectacles, permits side vision and incorporates four domed, screen indirect ventilators to ensure air supply with protection against splashing acids or chemicals.



No. GRI32 Indirect Ventilation. CHEMO-DUST GOGGLES. Frames moulded from non-irritation acid resistant rubber. Resilient soft-rolled edges ensure perfect fit to all facial contours. Replaceable "Tector-Tough" lenses. Conform to optical and safety standards. Can be worn over prescription spectacles.

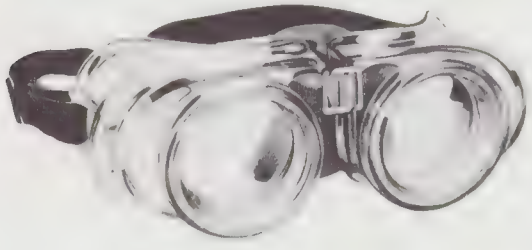
SAFETY GOGGLES

For grinding, chipping, spalling and similar operations. Modern manufacturing processes requiring eye protection have resulted in a wide variety of "Protector" goggle designs and lens specifications. Guaranteed to Australian, British and American Standards Specifications.



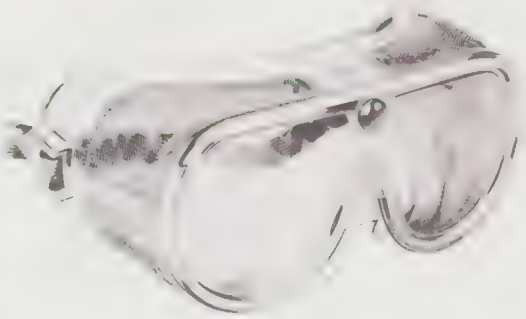
No. GG06. Heavy-duty grinding and chipping goggle with soft, pliable anatomically shaped cups, ensures a comfortable fit. Fog-free conditions maintained through "moulded-in" ventilators and air ports. Leather nose bridge permits quick and simple adjustment. Clear 50 mm "Tector-Tough" (TT) lenses and cover lens.

No. GGB15. Cups moulded of lightweight Butyrate Acetate; can be worn over spectacles. Adjustable leather nose bridge, moulded left and right cups for comfortable fit; rigid bridge bar enables both cups to be lifted at one time by one hand. Four direct screened ports plus 10 air ports around each lens ensure adequate ventilation. Fitted with clear 50 mm "Tector-Tough" (TT) lenses and cover lenses.



No. GG07. Heavy-duty, general purpose coverall goggle, super-soft, clear P.V.C. frame fits over spectacles, "moulded-in" frame ventilators and air ports. Adjustable leather nose bridge. Clear "Tector-Tough" 50 mm. lenses and cover lenses.

WIDE VISION GOGGLES



No. GAF88 "AIRFLEX"
- Super soft, flexible P.V.C. frames. Full vision range.
- Fits over personal spectacles.

"Airflow" gauze ventilation. Cushioned facial contact area. Lightweight, cool and fog-free. Replaceable .050 one-piece "Tectorlite" lens which is optically correct, has high impact resistance and wide visual field.

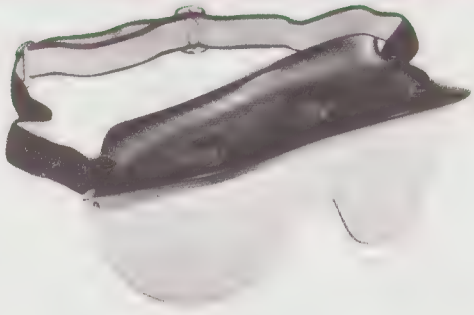
No. GVM80 "VIEWMASTER". Flexible general-purpose plastic goggles, moulded from soft clear P.V.C. material, meet a wide range of industrial applications. Grid type diffused vents allow ventilation, wide replaceable .050 optical quality "Tectorlite" lens.

No. GVF87 "VIEWFLEX". Wide vision, soft frame, comfortable fit, grid-type vents for fog-free conditions. Moulded from clear P.V.C., the frame locks the lens in place, yet allows quick replacement. "Protector" Poly-carbonate (TTT) one-piece lens—protection from severe impact and extreme heat. Optical clarity is preserved. Available only with a clear lens.

DUST AND HARVESTING GOGGLES

Lightduty Goggles for use in the variety of dust conditions encountered in field and/or agricultural operations.

No. GDP31. Lightweight eyeshield made from non-inflammable "Tectorlite" clear or green. One-piece for all-round vision, plastic-bound edges for comfort, direct ventilation. Also available with wool binding for perspiration absorption.



No. GMA74 MONO GOGGLE. All purpose chemo dust goggle. Angled lens of optical quality .090" acrylic for excellent vision and high impact resistance. Ventilation is given through three indirect ports on the Browguard frame. Suitable for use with Respirators.

PROTECTOR "1000 - HOUR" COVER LENS
Spatter cannot adhere—will outlast many glass covers—optically perfect.

PROTECTIVE FILTERS FOR GAS WELDING

DESCRIPTION OF OPERATION	Australian Classification A.S.Z45 Shade No.	British Classification BS679/47/59 Shade No.	American Classification GGG-G-513A Shade No.
Gas welding of aluminium and magnesium aluminium alloys	5-AL	3	3
Lead welding Oxygen welding Oxygen machine and handcutting Oxygen gouging Flame descaling Silver soldering (silver brazing) Fusion welding of zinc base die castings Bronze welding light gauge copper pipe and light gauge steel sheet	3 4	4	4
Fusion welding, copper and copper alloys Fusion welding, nickel and nickel alloys Fusion welding, medium thickness steel plate All braze welds in heavy-gauge steel and cast iron, except preheated work Re-building work of relatively small steel parts and areas for fusion welding All hard surfacing operations, including rail re-surfacing	5	5	5
Fusion welding of heavy steel Fusion welding of heavy cast iron Fusion welding and braze welding of preheated cast iron and steel castings Re-building large steel areas, e.g., large cams; etc.	6 7	6	6 7

APPROVED TO BRITISH STANDARD
BS 679
Lic. No. 3700

ALL "TECTORWELD" (TW) Filters comply with Standards and carry the British Standards "KITE" Mark Certificate of continuing quality.

SAFETY SPECTACLES

"HI-STYLER" Library Safety Spectacles

Available in Library frames S17 Series with 8 bridge/eye size combination; S18 Series "Multi-fitting" bridge. In a choice of three frame colours—crystal black or smoke. Fitted with "Tector-Tough" 3mm Glass, or CR39 lenses.
Manufactured from a butyrate acetate material. Features including cold adjustable side arms and interchange of component spares—sideshields, lenses, spatula temples and screws.

"LENSGUARD"

Clip-on lenses made from impact and splatter resistant CR39 in clear or green—weight is less than ¼ oz. Optical quality exceeds Standard Specification available for either standard or heavy duty library frames. **Illustrated No. S20 CP.**

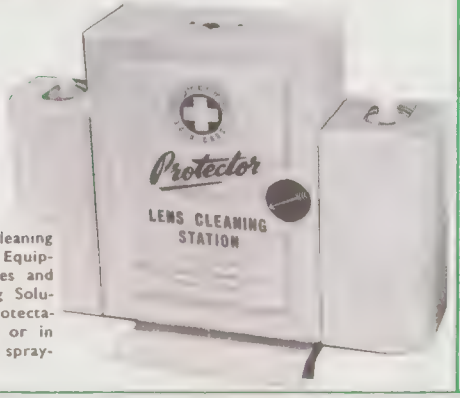
"SUPER-SIGHTGUARD"

Safety spectacles are manufactured from non-inflammable nylon. Lightweight frame. Comfortable multi-fitting bridge available with or without sideshields. Metal corded side arms allow cold adjustment.
No. S82CG-C with clear "Tector-Tough" glass lenses and "Snap-in" sideshields.
No. S82GG with shade 2 green "Tector-Tough" glass lenses.

FEATHERSHIELD

Rugged lightweight general purpose eye shield, with tough nylon frame, wrap-around for wide vision and protection.
Replaceable "Tectorlite" non-inflammable optical quality lenses—green, clear, amber, smoke. **No. L . . . /S78** (specify shade).

LENS CLEANING STATIONS



Protector Lens Cleaning Stations fixed to wall. Equipped with Lens Tissues and Lens Cleaner/Anti Fog Solutions in Aerosol "Protecta-pack" **No. SCS34-P** or in bottles with Atomiser sprayheads **No. SCS34.**

NYLON VISITORS SPECTACLES

Lightweight, flexible plastic frame, with lenses of optical quality acrylic in clear or smoke. Multi-fitting universal bridge. Sealed in hygienic plastic bag. Lenses easily replaced.
No. S41CS with clear lenses.
No. S41SS with smoke lenses.

VISITOR'S SPECTACLE WALL DISPENSER

Protector visitor spectacles conveniently packaged in a wall mounting dispenser which contains ten pair.

FACESHIELDS

FACESHIELDS for Impact, Heat, Chemical and Gas Welding Protection designed to provide a full range of protection for the face, eyes and neck.

BROWGUARD — F308 Series, high density moulded plastic for acid and impact protection. F408 Series, heat and high impact nylon.

VISORS: Aluminium bound, positive locking, 8″ or 10″ lengths in normal and wide flare for side protection. Choice of materials "Tectorlite", "Acidex" or "Thermoguard", Mesh-gauze, "Plastiweld".

HEADGEAR. Ratchet headsize adjustment and full "off the face" swivel action.

F408-8T

F408-10TF

F408-8M-83

F408-8G6

F408-8M

F308-8C

F308-8CF

F305-4C

No. F408-8T — Fibreglass browguard, with 8″ deep "Thermoguard" heat and penetration resistant visor also available with 8 x 3 replaceable window.

No. F408-10TF — As above with 10″ deep x 16″ wide "Thermoguard" visor for complete side face and neck protection.

No. F305-4C — "Super-Flex" head gear with patented "Back-grip" adjustment. Variable tension knob positive-action tilting, available in clear, light green or gauze. Visor lengths, 4″, 6″, 7″, 8″.

No. F308-8C — 8″ Clear .050″ "Tectorlite" visor attached to plastic browguard, also available with 8 x 3 replaceable window.

No. F408-8G6 — Fibreglass, browguard, Faceshield with replaceable spatter resistant "Plastiweld" visor. Complies with British Standard BS 679/59. Shades 4, 5 and 6 for Gas Welding and Cutting.

No. F308-8CF — As F308-8C with the added side protection of wide flare neck and ear coverage.

No. F408-8M — For excessive heat conditions combines good vision and heat dissipation. The fibreglass browguard is fitted with 8″ deep Mesh-gauze visor.

No. F408-8M-83 — As F408-8M with replaceable "Thermoguard" window available in clear or green.

EAR PROTECTION EQUIPMENT

PROTECTOR "EARGUARDS"
No. EM42 Headband Style
No. EM43 Neckband Style

No. EM42: Lightweight, high efficiency ear protection for continuous use over a wide range of noise levels. Manufactured from tough lightweight, acoustically perfect material. The lightly tensioned, adjustable headframe assures effective sealing and wearer comfort.

No. EM43: Offering the same features as the EM42 in a neckband style muff. For use with safety hats or welding shields. Supplied with rubber neckrest and overhead strap to ensure perfect fit and comfort. Both models have **replaceable** vinyl foam ear cushions.

PROTECTOR EAR PLUGS
No. EP27 — Available in Small, Medium or Large.

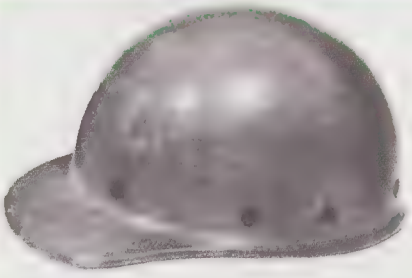
Designed by the Commonwealth Acoustics Laboratory and made from a specially developed synthetic rubber compound in three ear sizes. Features soft ribs to assist correct fitting and an extraction lug for easy removal. Complete kit comprises plugs and antiseptic lubricant, metal container.

PROTECTOR AUDIO SERVICE

Provides industry with complete Audio service. Protector have combined their Safety Advisory Service with a professional audiometrist to give:

1. Free initial investigation and continuous follow up service.
2. Audio survey of plant and report by Audiometrist.
3. Recommendations for "engineering-out" problems, or for proper use of personal protective equipment.
4. Complete personal check and establishment of personal Hearing History Record.
5. Lectures and films by trained personnel to highlight better understanding for the need for hearing conservation.

SAFETY HATS AND CAPS



"TUFF MASTER" CAP No. HC41

Made from a new lightweight co-polymer material. Features—rain catchment, preventing run off on the back of the neck; low wearing clearance 1⅛". Unique six point suspension of 1" terylene. Replaceable specially constructed elasticised sweatband.
Colours: White, Red, Blue, Yellow, Grey, Green and Orange. Total weight 11¼ ozs.
Tested and approved to Australian Standard Z10/67. Carries the Australian Standards Association "KITE" mark seal of approval.

"SAFEGUARD" HATS AND CAPS
Nos. H42 HC43

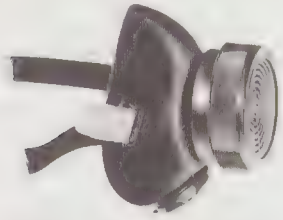
DUAL fibreglass shell of thermosetting polyester resin, reinforced with glass fibres and "veiled".
Features include: lightweight 13½ ounce, no metal parts, high dielectric strength, headgear of moulded polythene with replaceable sweatband.
Colours: White, Red, Blue, Yellow, Grey, Green, Orange.
Approved to British Standard BS. 2826 and carries British and Australian Standards "KITE" marks.

"TECTOR-TOUGH" HAT No. H24

Made from tough, co-polymer to withstand low and high temperature requirements for impact, penetration and high voltage tests. Combines safety, appearance and comfort; the smooth shell dome presents no dangerous projections where falling objects can lodge to concentrate impact.
Colours: White, Red, Blue, Yellow, Grey, Green and Orange.
Approved to British Standard BS. 2826 and carries British and Australian Standards "KITE" marks.

HALF-MASK RESPIRATORS

All "ProtectAir" half-mask respirators comply with Australian Standards Specifications A.S. Z18. All respirators are fitted with a new "quick-release" headband attachment.
FACIAL FIT: Available in "small", "medium" and "large" size.
NOTE: Respirators are supplied without cartridges. When ordering please specify cartridges required.



No. RQ100 Lightweight Respirator. Soft, pliable neoprene compound facepiece designed to fit all faces, has soft rolled edge and chin cup. Large inlet valve and covered exhaust valve minimise breathing resistance.

No. RQ1000 Single Cartridge Respirator, twin, large-size covered exhalation valves.

No. RQ200 Twin Cartridges and large inlet valves, with protected exhaust valve at base of respirator. Soft, rolled facial contact edge and chin cup, airtight seal to any face.

MULTI-PURPOSE REPLACEMENT CARTRIDGES
(Use with twin-cartridge respirators only).

No. RQ2000 Twin Cartridges large inlet valves, and twin covered exhalation valves ensure complete breathing comfort for long-wearing periods.

No. RQ3086 — "TOXIGUARD"
For use during crop spraying or dusting, mixing toxic insecticides or concentrates. For protection against insecticides, fungicides, herbicides, soil fumigants such as demeton (systox), parathion, aldrin, dieldrin, chlordane, E.P.N., nicotine, T.E.P.P., H.E.P.T. at field level concentrations. Complies with Australian Standard Z18.

RC74 — High efficiency cartridge for ultra-fine particles.
RC75 — For dust and/or fumes and acid gases.
RC76 — For dust and/or fumes and organic vapours.
RC79 — For paint fumes.
RC86 — For protection against insecticides and pesticides.

Also available:
EXHALATION VALVES, INHALATION VALVES, FACELETS, FACEPIECE HEAD HARNESS.

No. RM706 "DUSTETTE"
Lightweight Nuisance Dust Respirator. Provides a comfortable, dust-tight cushion fit to facial contours. Weight 1 oz.

STANDARD REPLACEMENT CARTRIDGES
RC54 — For nuisance dusts.
RC55 — For acid gases and organic vapours.
RC56 — For organic vapours in low concentrations.
RC69 — For spray painting.
RF52 — Pre-fitted for spray painting. Use with RC69 cartridge

No. RH4086 AGRICULTURAL RESPIRATOR HOOD
Lightweight Reinforced P.V.C. hood, replaceable non-inflammable .050" "Tectorlite" window.
Combined with RQ3086 respirator, provides complete head, eye, neck and respiratory protection.

No. RSA1500 — CONSTANT FLOW HALF-MASK AIRLINE RESPIRATOR
Moulded face piece with soft rolled edges for gas tight fit to all facial contours. Air diffuser under built-in chin cup and three exhaust valves. Purified air flow to the face is regulated by RSR20 air regulator unit. Air pressure range 5 to 20 p.s.i.

No. 3C/20 P.S. Deluxe — Full facemask canister type Respirator featuring "Protector-SurvivAir" facemask with easily replaceable full bubble type visor. Canisters screw directly to the mask and require no special tools for replacement.

SUPPLIED AIR EQUIPMENT AND ACCESSORIES

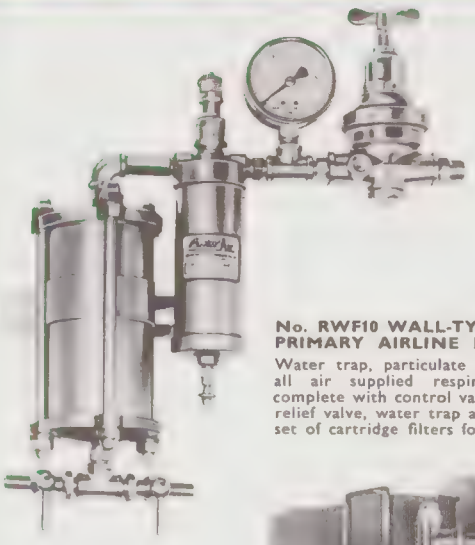
DUST AND CHEMICAL AIR SUPPLIED HOODS

For use in toxic or irritant dust and fume conditions which may be ingested through the skin, eye or respiratory system. Not to be used in contaminants that are immediately dangerous to life or health.

All air supplied units comply with Australian Standards A.S.Z18.

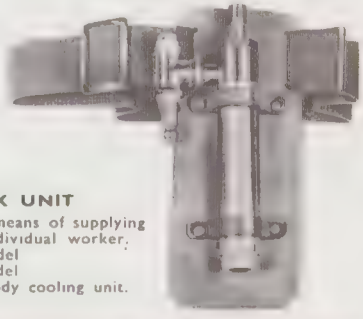
No. RHD46. Dust hood for protection in extreme nuisance dust conditions. Replaceable polyesterised nylon hood supported by a fibreglass inner frame with optilite main lens and cover lens.

No. RHC48. A chemical hood of lightweight yellow P.V.C. coated terylene protection for eyes, face and head against splashing acids. Fibreglass inner frame has adjustable nylon headgear, "Chemex" main window and vinyl cover lens.



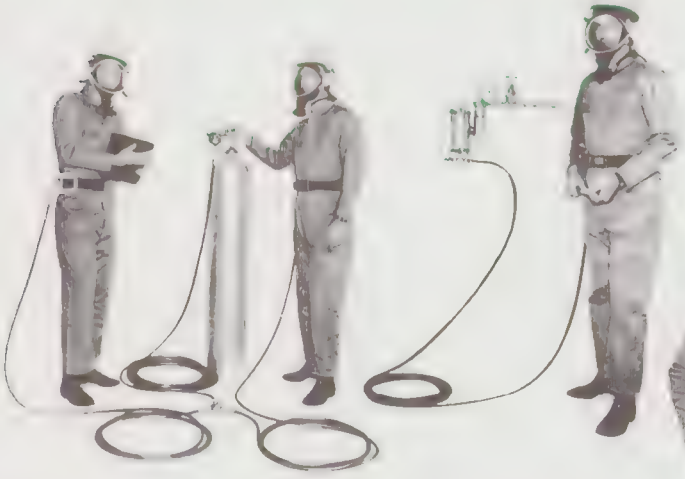
No. RWF10 WALL-TYPE PRIMARY AIRLINE FILTER.

Water trap, particulate filter, for use with all air supplied respirators and hoods, complete with control valve, pressure gauge, relief valve, water trap and filters, including set of cartridge filters for oil fume exclusion



PROTECTAIR VORTEX UNIT

Efficient and lightweight means of supplying clean, cool air to the individual worker.
No. RAC 11-11 c.f.m. model
No. RAC 25-25 c.f.m. model
No. RAC 25B-25 c.f.m. body cooling unit.

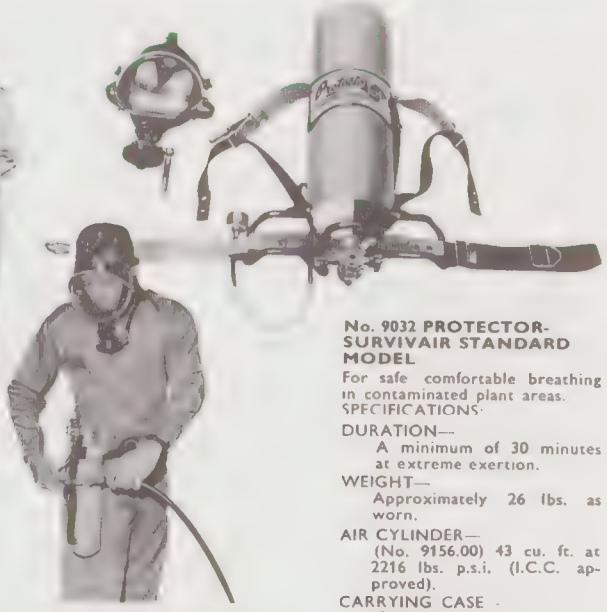


Typical supplied-air system using a high-pressure air supply cylinder and No. 9011.01 Airline Respirators.

The system illustrated includes two-man capacity pressure reduction regulator—one 50 ft. length low-pressure hose with quick-connect couplings—a two-outlet manifold block—two 25 ft. lengths of low-pressure hose with quick-connect couplings and two full mask Protector-Survivair respirator and belt assemblies.

Typical supplied-air systems using plant compressor as air source. RWF10 Filter and 9011.01 Airline Respirator.

This system illustrated—includes a shut-off valve, pressure reduction regulator, pressure relief valve, air filter, 25 ft. length low-pressure hose, and Protector-Survivair full-mask respirator with belt assembly.



No. 9601.10 "HIP-PAC" PROTECTOR-SURVIVAIR

For continuous use in irrespirable atmosphere, having self-contained emergency escape air supply.

No. 9032 PROTECTOR-SURVIVAIR STANDARD MODEL

For safe comfortable breathing in contaminated plant areas.
SPECIFICATIONS:

DURATION—
A minimum of 30 minutes at extreme exertion.

WEIGHT—
Approximately 26 lbs. as worn.

AIR CYLINDER—
(No. 9156.00) 43 cu. ft. at 2216 lbs. p.s.i. (I.C.C. approved).

CARRYING CASE
(26¾" x 18" x 11")

9032.00—Unit complete in storage case.
9032.02 Unit without case.
9156.00—Spare cylinder complete with cylinder valve

"EARGUARD" COMMUNICATIONS EQUIPMENT

"STANDARD" HEADSET

Ear protection (NPL rating 35 db over Threshold) and reception in high noise areas, fitted with 300 ohms medium to high impedance, rocking armature dynamic earphones, connected in parallel. ("In Series" 600 ohm wiring for special applications.) Also allows user to receive reception-clear communications from radio or other closed wire systems.
Headset is complete with 3 ft. flexible lead and twist free pivot plug. Ear Cushions replaceable.

No. EMC 2—Headband Style (illustrated).
No. EMC 3—Neckband Style.

"STANDARD" HEADSET/ THROAT MICROPHONE

Maximum Ear protection and voice transmission in areas where noise exceeds threshold point. THROAT MICROPHONE: For noise exclusion. No background noise interference possible. Weight 3 oz. Microphone is fully tropic-proof. Special output: normal 2-5m. W.—loud 6-10 m.W., total impedance 300 ohms.

No. EMC 2-TA—Headband Style (illustrated).
No. EMC 3-TA—Neckband Style.

"LIGHTWEIGHT" HEADSET/ THROAT MICROPHONE

Suitable for administrative control where hearing protection is not required. Rocking armature is contained within headset and fitted with flexible lead and plug for connection to "Pocket-Pak" amplifier, supplied complete with Throat Microphone, and "Pocket-Pak".

No. EMC L-TA

"POCKET-PAK" TRANSISTORISED AMPLIFIER

4-transistor, printed circuit, 9-volt battery operated amplifier, with non corrosive metal housing. Amplifier is contained in a plastic clip-on pocket wallet battery life minimum of 200 hours, normal use.

LAND LINE

Insulated P.V.C.-Shielded co-axial cable available in standard 50 ft. lengths, fitted with plugs designed to prevent cable twist—cable also available in longer lengths.

No. CC 50/EMC.

"STANDARD" HEADSET/MASK MICROPHONE

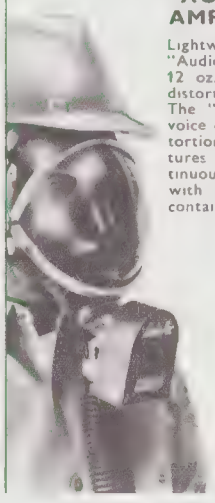
EARGUARD with noise-shielded mask microphone with 300 ohm impedance inserts. For use in areas where noise exceeds threshold point. Quick-release snap stud allows the microphone mask to hang conveniently from headset enabling conversation in moderate noise areas.
A "push-to-talk" switch situated on the mask microphone is for microphone isolation.
Headset is provided with flexible P.V.C. lead terminated in a 5 pin plug to suit the "Pocket-Pak" amplifier.

No. EMC 3-MA—Neckband Style (illustrated).
No. EMC 2-MA—Headband Style.

"STANDARD" HEADSET/ TRANSCEIVER UNIT

Above-Threshold Walkie-Talkie unit. Comprises Earguard headset, Throat Microphone and Protector "Telecon" Walkie-Talkie unit.
Transceiver unit is approved by N.S.W. Dept of Mines No. 66/7, P.M.G. Australia-wide, Mobile Radio-Telephone services.
Available with "Standard" or "Lightweight" headsets.

No. EMC 3-TW—Neckband Style (illustrated).
No. EMC L-TW—"Lightweight" Headset.



"AUDIO PAC" AMPLIFIER

Lightweight . . . Transistorised "Audio Pac" loud-hailer, weight 12 oz. Designed for clear undistorted communications.
The "Audio Pac" unit projects voice clearly 500 ft. without distortion. Operates in temperatures minus 25° to 145° F. continuously for 8 hours. For use with Protector-SurvivAir self-contained breathing apparatus.

ARNOLD DEVILBISS SPRAY PAINTING EQUIPMENT

TYPE K-JGA-502

Light weight, finely balanced, heavy duty gun, suitable for high speed production spraying, fitted for finest quality work.

TYPE TX18-GP

A general purpose gun, designed to work at low, medium or high pressures.

SPECIFICATIONS

Air Inlet	¼ in. B.S.P.
Fluid Inlet	⅜ in. B.S.P.
Net Weight	1 lb. 7 ozs.

SOUND DEADENING TYPE SPRAY GUN—T568

A special gun for application of vehicle sound deadening compounds and similar heavy and viscous materials.

SPECIFICATIONS

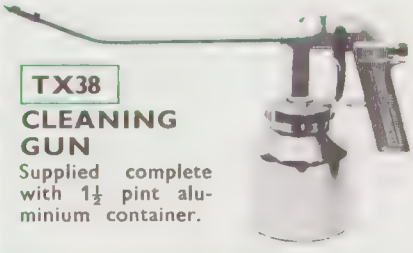
Air Inlet	¼ in. B.S.P.(M)
Fluid Inlet	¾ in. B.S.P.(M)

TX26 TYPE EP

A low priced quality gun for light duty work of all kinds operated from 15 to 30 lbs. per sq. in.

TYPE KX-KR-550

A lightweight, 2 pint suction cup. Features a positive lever operated quick clamp cover. For use on K-JGA, S.A., G.P. and K-MBC guns. Spare cups also available (K-KR-417).



TX38 CLEANING GUN

Supplied complete with 1½ pint aluminium container.

T463 TYPE NS

A small precision spray gun with extreme accuracy. For general touch up work, spotting and shading.

AIRLESS SPRAY PAINTING OUTFIT KX/QH/633

A rugged compact airless spray outfit that one man can carry anywhere—Weight 17 lbs.

REMOTE CUP EQUIPMENT

Consists of KX-KB 520 two quart pressure feed cup fitted with extra-sensitive pressure regulator and gauge, air adjusting and safety valve. K-JGA-502-1203 FX spray gun.

Air Inlet	¼" BSP
Fluid Inlet	⅜" BSP

ARNOLD DEVILBISS SPRAY PAINTING EQUIPMENT

AIR HOSE CONNECTION
Connections ¼″ B.S.P. Thread

PF128	To suit ¼″ D230 hose
PF129	To suit ⅜″ D231 hose

MATERIAL HOSE CONNECTION

PF7	To suit ⅜″ Thiokol Hose
P135	⅜″ B.S.P. Couplings

AIR HOSE
Nylex Plastic Lightweight

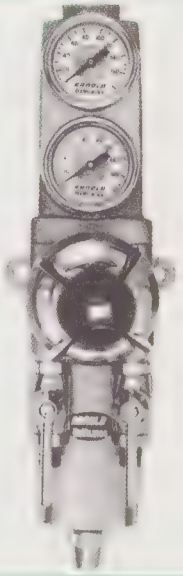
D230 ¼″ I.D. D231 ⅜″ I.D.

MATERIAL HOSE

For use with Paints, Varnishes, Lacquers and Solvents.
D61 ⅜″ I.D. Hose (Thiokol Lined)
Plastic Hose can be supplied

TY53
AIR TRANSFORMER

Removes moisture, oil and dust from the air supply.



Capacity 50 cfm of Air.
Regulated Air 100 lbs/sq. inch.
Inlet Connection ½″ B.S.P. F.
Regulated Air Connection 2-¼″ B.S.P. M.
Weight 6½ lbs.
Height 12¼″

LARGE CAPACITY MATERIAL CONTAINERS
Hand and R.A.M. Operation

Capacity Gallons	2	5	10	25
Model (hand stirrer)	TW15	TW18	TW17	TW37
Model (R.A.M. type)	—	TW39	TW36	TW38
Air Inlet	¼″ B.S.P.	¼″ B.S.P.	¼″ B.S.P.	¼″ B.S.P.
Fluid Outlet	⅜″ B.S.P.	⅜″ B.S.P.	⅜″ B.S.P.	⅜″ B.S.P.
Overall Height	23½″	26½″	31½″	52″
With Air Motor	—	31″	36″	56½″
Overall width	16″	18″	23″	23″

Spare Insert Containers available.

QUICK CHANGE HOSE CONNECTION —T475

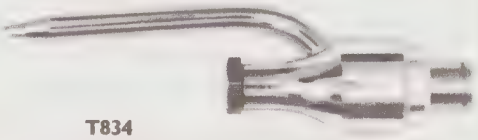
For use with ¼″, 5/16″ and ⅜″ Air Hose.

Other quick change connections available, also Material Line quick change connections.

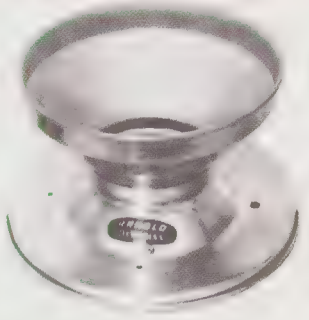
AIR DUSTING TYPE GUNS

KX-DGD-502
Heavy Duty pistol grip squeeze type trigger.

KX/DGC/501
Small, compact duster with thumb button trigger ¼″ B.S.P. female connection.

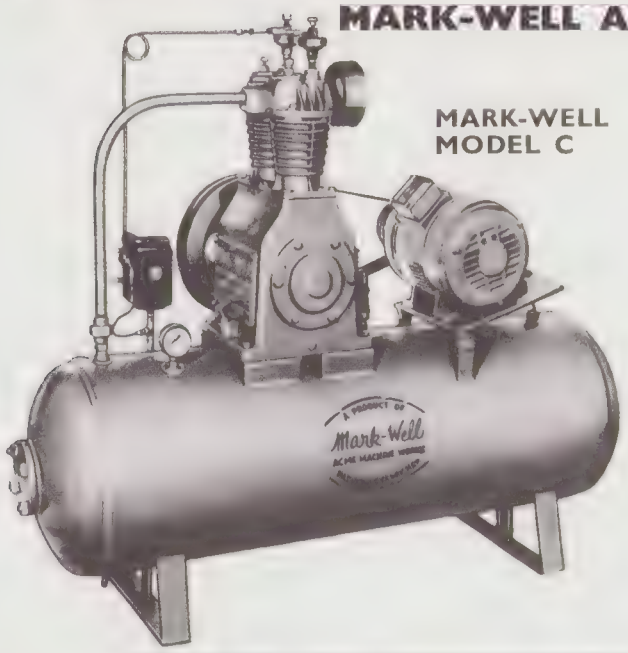


T834
Light and compact pressure operated type trigger.

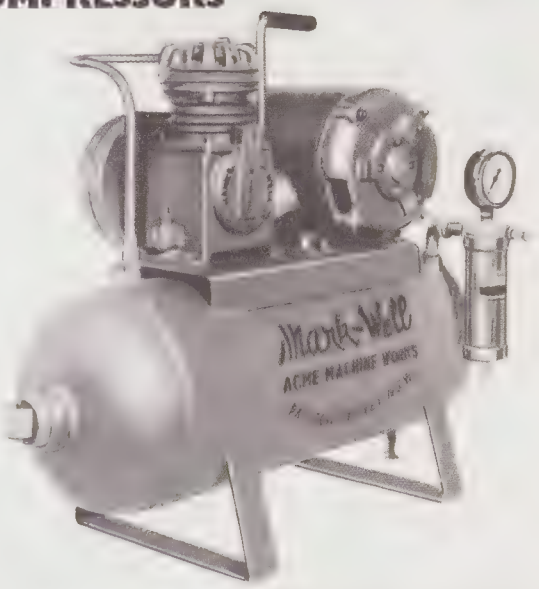


KX-43613-011
Vacuum Paint Strainer. Filters up to 5 gals. of heavy Material per Minute. Container I.D. 9¼″-12″ Air Pressure 40-80 P.S.I. using 3-5 C.F.M.

MARK-WELL AIR COMPRESSORS



MARK-WELL
MODEL C



MARK-WELL MINOR

Model	Minor	B	B6	C	C14	D	D25	H
Approximate Air Output	2-3 C.F.M.	4.5 C.F.M.	6.5 C.F.M.	9 C.F.M.	14 C.F.M.	18 C.F.M.	25 C.F.M.	35 C.F.M.
Maximum Pressure	100 lbs.	100 lbs.	100 lbs.	150 lbs.	150 lbs.	150 lbs.	150 lbs.	125 lbs.
Standard Receiver	*8″ x 18″ x 100 lbs.	30″ x 12″ x 100 lbs.	30″ x 12″ 100 lbs.	54″ x 15″ 150 lbs.	54″ x 15″ x 150 lbs.	54″ x 15″ x 150 lbs.	54″ x 15″ x 150 lbs.	72″ x 18″ x 150 lbs.
H.P. Required	⅓ to 60 lbs. ½ to 85 lbs.	¾ to 85 lbs. 1 to 100 lbs.	1¼	2	5	3 to 90 lbs. 5 to 150 lbs.	7.5	7.5

*** Minor also available in Platform Model. All Compressors can be supplied with Electric or Petrol Motors.**

COM-PAK PORTABLE AIR COMPRESSORS

Approximate Air Output	4 C.F.M.	8 C.F.M.
Maximum Air Pressure	100 lbs.	130 lbs.
H.P. Required	¾	1½

3 H.P. 4 Stroke Petrol Motor can be supplied

TUFFY SPRAY PAINTING OUTFIT KX-NCE-607

Low pressure Spray Painting Outfit, TX26EP includes 1/3 H.P. Motor, pressure feed internal mix spray gun with 1½ pint container, KX-2 air hose, ¼″ I.D. x 25′, complete with fitting. KX-NCE-501 outfit supplied less gun and hose, or less gun, hose and Electric Motor.

Also available TY60 Petrol Model.

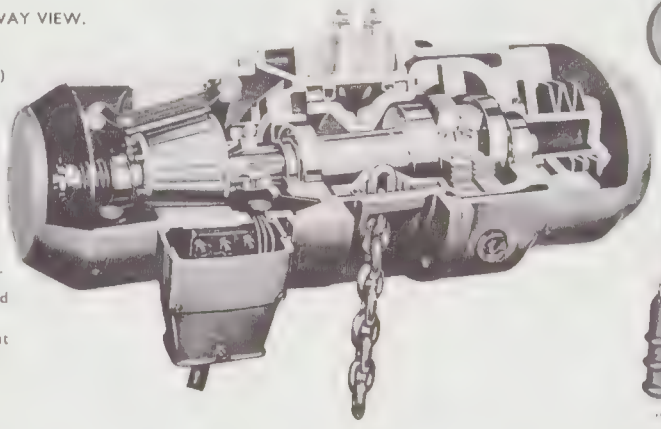
"STAHL" ELEKTUS CHAIN HOISTS

Design—Totally enclosed construction, weatherproof, largely impervious to dust and dirt, low dead weight.
Hoist Motor—Tapered armature motor with conical brake, requiring no adjustment.
Gearing—Totally enclosed planetary gear, immersed in an oil bath.
Overload Device—Initially pre-set for an overload of 30 per cent., it can be adjusted.
Safety Limits—For both top and bottom positions, unaffected by phase reversal.
Load Chain—Calibrated link chain, plated to resist corrosion and chemical attack. The load sprocket is fully machined and hardened.
Control Pendant control either with snap action direct power line starting, or low voltage operation.
Capacity—From 2½ cwts. to 2 ton.

"STAHL" ELEKTUS CHAIN HOIST WITH ANCHOR PUSH TYPE TROLLEY AND CHAIN BUCKET

R10 ELECTRIC CHAIN HOIST, CUT-AWAY VIEW.

1 Taper motor rotor
2 Rotor (movable in axial direction)
3 3-Ball Coupling
4 Taper Brake
5 Brake Spring & Adjust. Nut
6 Central shaft for motor and gears
7 Counterweights
8 Satellite gears
9 Load sprocket with internal gear
10 Slip Clutch Flange with internal gear
11 Slip Clutch overload protection and limit for hook movement
12 Slip Clutch Spring with adjusting nut



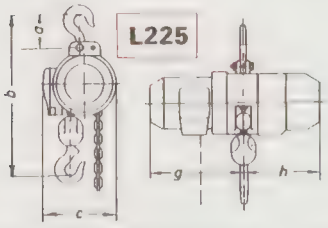


Fig. 1. Elektus Single Fall of Chain, Type RE.

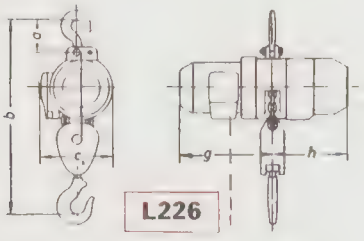


Fig. 2. Elektus Double Fall of Chain, Type R

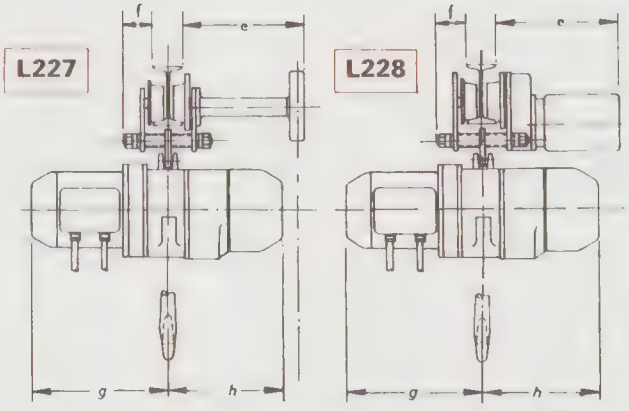


Fig 3 Elektus with Geared Trolley.

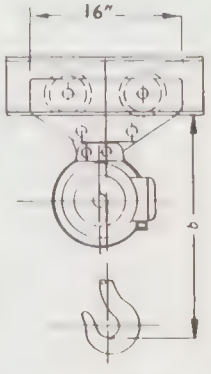


Fig 4. Elektus with Motorised Trolley

Fig. 1 and 2 Type	RE 2–8	R 2–8	RE 6–6	RE 6–12	R 6–6	R 6–12	RE 12–8	RE 12–16	R 12–8	R 12–16
Capacity . . . . . ton	⅛	¼	¼	¼	½	½	½	½	1	1
No. of chain falls . . .	1	2	1	1	2	2	1	1	2	2
Lift . . . . . ft	10 ft, additional lift on request									
Lifting speed . . . . ft/min	26	13	20	40	10	20	26	52	13	26
Motor . . . . . HP	0·34	0·34	0·6	1·4	0·6	1·4	1·2	2·5	1·2	2·5
Motor . . . . . %ED	30	30	25	40	25	40	30	30	30	30
Weight of Hoist . . . lbs	38	40	80	86	88	95	143	165	158	180
Hook height (a) . . . inch	3 9/16	3 9/16	4	4	4	4	4⅛	4⅛	4⅛	4⅛
Headroom (b) . . . . inch	15 3/8	17 3/8	19¼	19¼	22	22	21¾	21¾	26	26
Width (c) *) . . . . inch	7 7/8	7 7/8	9	9	9	9	9	10	9	10
Length (g) . . . . . inch	6½	6½	9¼	9¼	9¼	9¼	12	11⅛	12	11½
Length (h) . . . . . inch	7½	7½	7	7	7	7	10	10	10	10

*) If hoist fitted with low voltage control, dimension C will be increased by 2" approx.

"STAHL" ELEKTUS CHAIN HOISTS

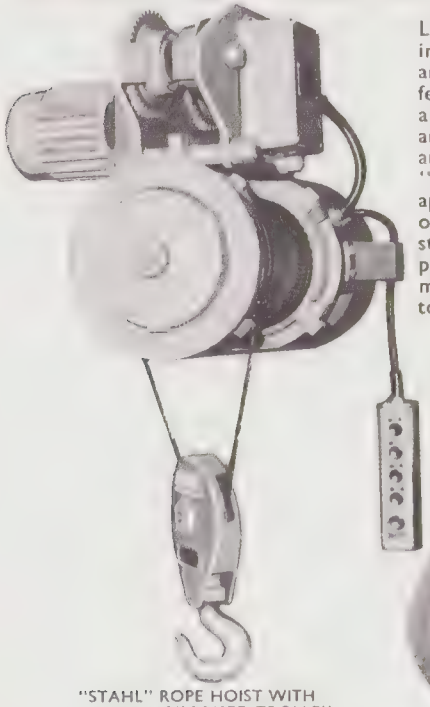
Fig. 3 and 4 Type	RE 2–8	R 2–8	RE 6–6	RE 6–12	R 6–6	R 6–12	RE 12–8	RE 12–16	R 12–8	R 12–16
Capacity . . . . . ton	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	1	1
No. of chain falls	1	2	1	1	2	2	1	1	2	2
Lift . . . . . ft	10 ft, additional lift on request									
Lifting speed . . . . ft/min	26	13	20	40	10	20	26	52	13	26
Motor . . . . . HP	0·34	0·34	0·6	1·4	0·6	1·4	1·2	2·5	1·2	2·5
Motor . . . . . %ED	30	30	25	40	25	40	30	30	30	30
Headroom (b) . . . . inch	$15\frac{1}{2}$	$17\frac{1}{2}$	$16\frac{1}{2}$	$16\frac{1}{2}$	22	22	19	19	26	26
Travelling motor . . . HP	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
Travelling speed . . . ft/min	70	70	70	70	70	70	70	70	70	70
Width (e) *) Fig. 3 . . . inch	$2\frac{3}{8}$	$2\frac{3}{8}$	$2\frac{3}{8}$	$2\frac{3}{8}$	$12\frac{1}{4}$	$12\frac{1}{4}$	$12\frac{1}{4}$	$12\frac{1}{4}$	$12\frac{1}{2}$	$12\frac{1}{2}$
Width (f) Fig. 3 . . . inch	$2\frac{3}{8}$	$2\frac{3}{8}$	$2\frac{3}{8}$	$2\frac{3}{8}$	$2\frac{7}{8}$	$2\frac{7}{8}$	$2\frac{7}{8}$	$2\frac{7}{8}$	3	3
Width (e) Fig. 4 . . . inch	12	12	12	12	12	12	12	12	12	12
	Counterweight									
Width (f) Fig. 4 . . . inch	10	10	$3\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{4}$	$3\frac{1}{4}$
Trolley and min. size of RSJ.	$\frac{1}{4}$ or $\frac{1}{2}$ t. Trolley 5"x2½" RSJ.		$\frac{1}{2}$ t. Trolley 5"x2½" RSJ.		1 t. Trolley Push Trolley 6"x2½" RSJ. Geared Trolley 6"x3" RSJ.				2 t. Trolley 7"x3½" RSJ.	

*) For $\frac{1}{8}$ and $\frac{1}{4}$-ton hoists dimension e is given for push type trolley. For $\frac{1}{2}$ and 1-ton hoists this dimension is for geared type trolley. Should push type trolley be fitted, then e = f.

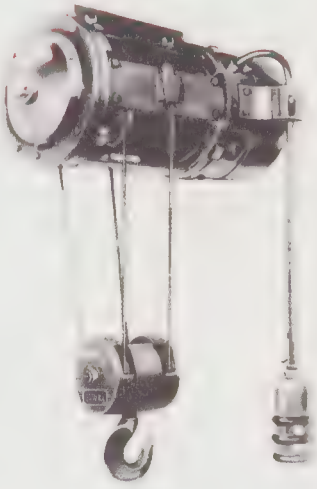
Also Available 2 Ton Capacity

"STAHL" ELECTRIC ROPE HOISTS

Low weight and small dimensions are the immediate result of the completely enclosed and condensed design. It is an important feature of "Stahl" Rope Hoists that they are built up from a number of independent and self-contained sub-assemblies. All parts are easy to exchange and easily accessible. "Stahl" Rope Hoists are adaptable for most applications; they can either be suspended or foot mounted at the side or on top of the structure or trolley. The standard design provides Hoists with one speed. However, micro unit for creeping speed can be fitted to every Hoist.



"STAHL" ROPE HOIST WITH ANCHOR MOTORISED TROLLEY



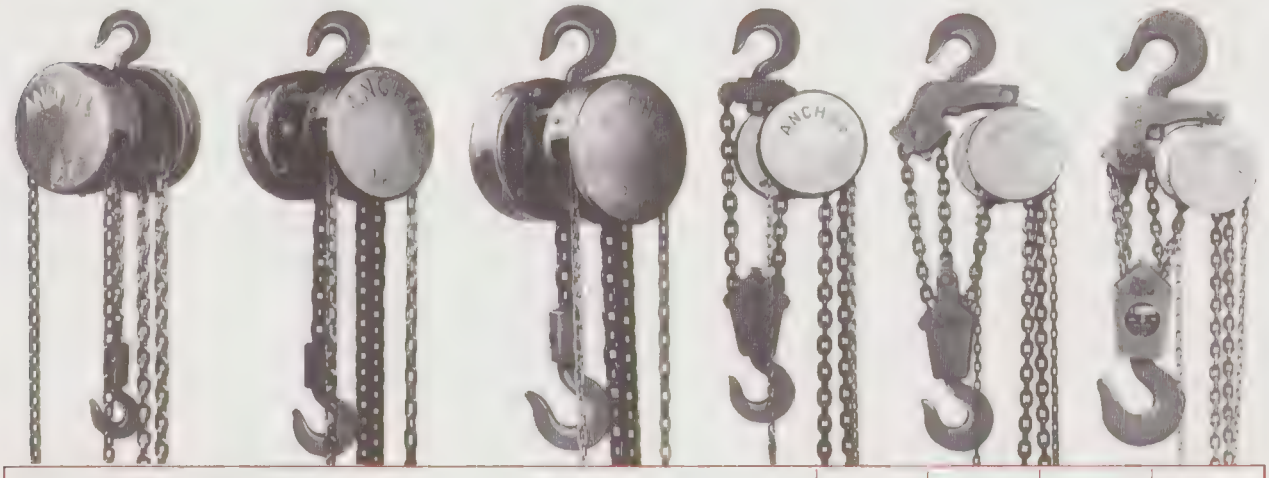
"STAHL" ROPE HOIST (EYES SUSPENSION)

"STAHL" ROPE HOIST WITH ANCHOR MOTORISED TROLLEY. EXTRA CLOSE HEADROOM ARRANGEMENT

"Stahl" Electric Rope Hoists are available in a range of Hoist Capacities from 1 ton to 16 tons.

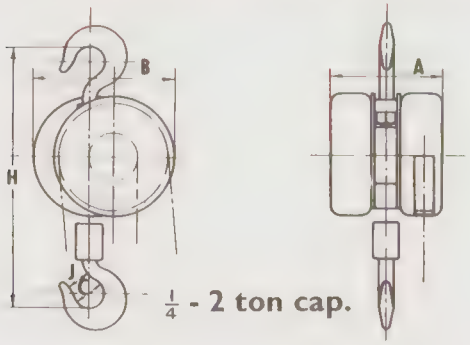
"ANCHOR" CHAIN PULLEY BLOCKS MODEL LH ¼ to 8 Ton Cap.

L234	L235	L236	L237	L238	L239
¼ - ½ TON	1 TON	1½ - 2 TON	3 TON	5 TON	8 TON

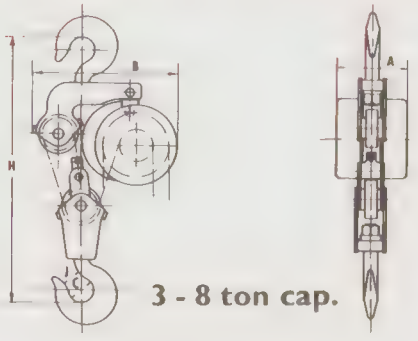


TECHNICAL DATA

Capacity in tons	Prefix of Serial No.	H Headroom	A	B	C	J	Dia. of Load Chain and Standard length (ft.)	No. of Falls of Load Chain	Effort on Hand Chain in lbs.	Weight in lbs. Approx.	Movement of Hand Chain to Lift Load 1 ft. (feet)
¼	L	11½″	6¼″	9″	1 5/16″	1″	9/32″ × 10	1	35	31	16
½	L	11½″	6¼″	9″	1 5/16″	1″	9/32″ × 10	1	70	32	16
1	M	15″	8½″	10″	1 1/16″	1⅜″	⅜″ × 10	1	75	60	30
1½	P	19″	10½″	13″	2¼″	1 11/16″	½″ × 10	1	60	103	57
2	P	20″	10½″	13″	2⅝″	1 15/16″	½″ × 10	1	90	110	57
3	P	32″	10½″	15″	3 3/16″	2⅜″	½″ × 18	2	60	140	114
4	P	32″	10½″	15″	3 3/16″	2⅜″	½″ × 18	2	90	140	114
5	P	35″	10½″	20″	3⅜″	2½″	½″ × 25½	3	75	240	171
6	P	35″	10½″	20″	3⅜″	2½″	½″ × 25½	3	90	240	171
8	P	44″	10½″	21″	4⅛″	3⅛″	½″ × 48	4	90	400	228



¼ - 2 ton cap.



3 - 8 ton cap.

"ANCHOR" CHAIN PULLEY BLOCKS MODEL LH 10 - 20 Ton Cap.

SPECIFICATION

FRAME of "ANCHOR" chain blocks are pressed steel, electroplated.

GEAR & PINIONS. Heat-treated alloy steel, generated teeth and completely enclosed (Fig. 3 and 4).

LOAD CHAIN WHEEL & SHAFT. One piece steel, milled chain pockets.

BEARINGS. Sealed ball bearings.

LOAD BRAKE. Weston screw type with Ferodo brake washer.

HAND CHAIN WHEEL. Cast iron.

PAWL. Steel with oilite bush.

LOAD CHAIN. Higher tensile steel to BSS 1663/1950.

LOAD CHAIN GUIDE. Positive chain guide of steel preventing the chain from jumping over load wheel (Fig. 2).

CHAIN ANCHORAGE. Slack end of load chain is anchored to withstand full load plus pull of hand chain when load chain is fully run out.

HOOKS. Forged steel to BSS 2903/1957 and 482/1958. Bottom hooks are fitted with sealed ball or roller thrust bearings.

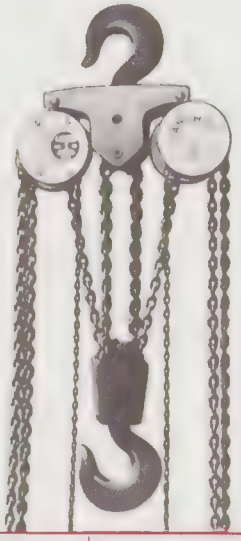
LUBRICATION. Blocks require no lubrication except through grease nipple for brake screw.

LIFT. Standard lift is 10 feet hook to hook; additional lift can be supplied as required.

APPROVED in all States in Australia (Class 3 in N.S.W.). All "ANCHOR" chain blocks are tested to regulations before despatch. The full range comply with the rules of the Standards Association of Australia and are manufactured to the requirements of the Department of Labour, Industry and Social Welfare, N.S.W., Victoria and other States.

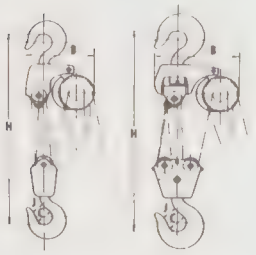
L240
Simplex 10 ton

L241
Duplex 10 ton

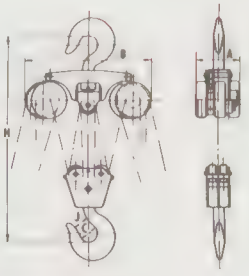


L242
Duplex 15 & 20 ton

Capacity in tons	Prefix of Serial No.	H Head-room	A		B		No. of Falls of Load Chain	Dia. of Load Chain and Standard length ft.	Weight in lbs. Approx.		Effort on Hand Chain in lbs.
			Simplex	Duplex	Simplex	Duplex			Simplex	Duplex	
10	P.	50″	10½″	13″	21″	35″	6	½″ x 72	733	755	90
12	P.	53″	10½″	13″	21″	35″	6	½″ x 72	760	780	90
15	P.	55″	13″	13½″	26″	39″	8	½″ x 96	1300	1350	90
20	P.	60″	14½″	15″	26″	39″	10	½″ x 120	1600	1870	90
25 to 40	on application										



Simplex



Duplex

Fig. 1. Load Brake Arrangement (All Blocks)

Fig. 2. Load, Chain Guide and Stripper (All Blocks)

Fig. 3. Gears Arrangement ½-Ton Block

Fig. 4. Gears Arrangement 1 and 2-Ton Block

"ANCHOR" GIRDER TROLLEYS

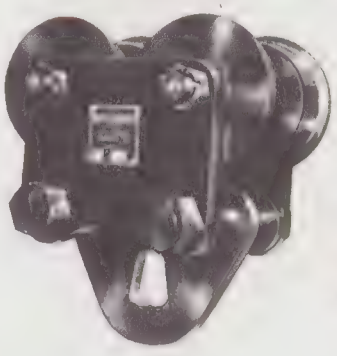
The following range of Anchor trolleys are available:

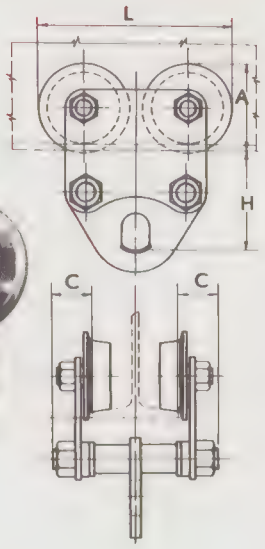
1. Standard trolleys: (a) Push type (Fig. 1), (b) Geared type (Fig. 2).
2. Swivel trolleys to negotiate curved runways.
3. Electric Motorised trolleys for electric chain or rope hoists.
4. Special trolleys suitable for close coupling with electric chain or rope hoists and suitable to run on special runways.

L243

TYPE PGT

FIG. 1. PUSH TROLLEY

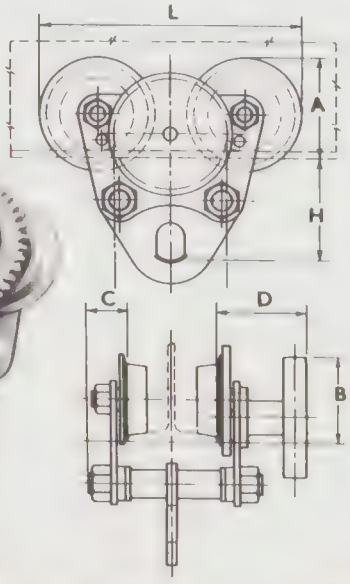




L244

TYPE GGT

FIG. 2. GEARED TROLLEY



SPECIFICATION:

Side Plates—Steel. If requested these will be hot dip galvanised.

Wheels—Cast iron machined tread. All sizes of trolleys can also be supplied with steel, or phosphor bronze spark-proof wheels.

Bearings—All wheels are fitted with ball bearings.

Axle—Steel screwed NF.

Width—Trolley width can be adjusted up to 1½"-2" to suit runway as specified on the chart by rearranging adaptor rings in suitable combinations. Trolleys can also be supplied to suit beams wider than those listed on the chart.

TECHNICAL DATA

PUSH & GEARED TROLLEY					PUSH TROLLEY				GEARED TROLLEY							
Capacity in tons	Adjustable to R.S.J. Width		H	Min. Radius Curve	A	C	L	Weight in lbs.	A	B	C	D	L	Hand Wheel Dia.	Weight in lbs.	Hand Chain
	Standard	Extra Wide	Head-room													
¼	1¼"–2"		3½"	3'–0"	2½"	1⅜"	5⅝"	5								
½	2½"–4"		4⅛"	3'–0"	3⅛"	2⅜"	7¼"	17							55	
1	2½"–4½"	8" max.	4⅞"	3'–0"	4⅜"	2⅞"	10⅛"	30	5"	5⅛"	2⅞"	5¾"	14"	7⅛"	57	7/32"
2	3½"–5"	8" max.	5⅞"	5'–0"	5"	3"	11¼"	50	5¾"	5"	3"	6"	14¾"	7⅛"	76	
3	4"–5½"	8" max.	6¾"	6'–0"	6¼"	3⅜"	13¼"	80	7⅛"	6⅛"	3⅜"	6½"	18 5/16"	10"	120	
5 & 6	4½"–6"	8" max.	8½"	8'–0"	7⅜"	3¾"	15⅝"	140	7⅞"	8½"	3¾"	6¾"	18¾"	13"	180	
8	6"–8"		11½"	12'–0"	9"	4½"	21."		9¾"	10¼"	4½"	8⅛"	22⅝"	15"		¼"
10 & 12	6"–8"		14¼"	12'–0"	9"	4⅝"	21"		9¾"	10¼"	4⅝"	8⅛"	22⅝"	18"		
15	6"–10"		16"	12'–0"	11¼"	3¾"	23¾"		12"	10¼"	3¾"	8⅛"	25⅛"	18"		
20	7"–10"		17⅜"	15'–0"	12"	4⅞"	24⅝"		13"	15"	4⅞"	8¾"	25⅞"	24"		

1 ton trolley not suitable for 4" x 3" RSJ - modified trolley can be supplied.
3 ton trolley not suitable for 6" x 5" RSJ - modified trolley can be supplied.

TRACK WHEELS for TROLLEYS and UNDERHUNG TYPE CRANES

L245

FIG. 1

L246

FIG. 2.

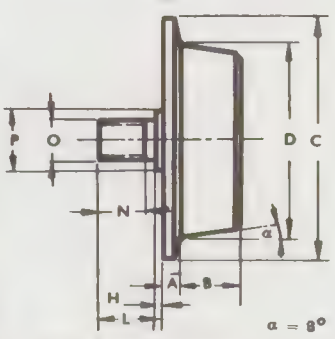


FIG. 3. PLAIN WHEEL

FIG. 4. GEARED WHEEL

Capacity in Tons on 4 Wheels	PLAIN AND GEARED WHEELS								AXLES						GEARING DATA								
	Material	wheel diameter D ins.	A ins.	B ins.	C ins.	E cast (ins.)	E mach.	F ins.	G ins.	H ins.	L ins.	M ins.	N ins.	O	P ins.	D.P.	No. of Teeth Cast W	No. of Teeth Cast P	No. of Teeth Mch W	No. of Teeth Mch P	Centre Distance (Wheel-Pinion) (ins.)	Pinion Bore dia. (in.)	Suitable for min. size of R.S.J.
$\frac{1}{4}$	M.S.	$1\frac{7}{8}$	$\frac{3}{16}$	$\frac{9}{16}$	$2\frac{3}{8}$	—	—	—	—	$\frac{1}{8}$	$\frac{11}{16}$	—	$\frac{9}{16}$	$\frac{1}{2}$NF.	$\frac{3}{4}$	—					—	—	$1\frac{1}{4}$″ wide
$\frac{1}{2}$–1	C.I.	$2\frac{7}{16}$	$\frac{5}{16}$	$1\frac{1}{16}$	3	4.4		$\frac{5}{8}$	$1\frac{13}{16}$	$\frac{1}{8}$	$1\frac{1}{16}$	$1\frac{1}{8}$	$\frac{7}{8}$	$\frac{3}{4}$NF.	$1\frac{1}{8}$	5	20	11	—	—	3.187	$\frac{7}{8}$	$2\frac{1}{2}$″ wide
1	M.S.	$2\frac{5}{8}$	$\frac{1}{4}$	$\frac{5}{8}$	$3\frac{1}{4}$	—	—	—		$\frac{17}{32}$	$1\frac{1}{16}$	—	$\frac{7}{8}$	$\frac{3}{4}$NF.	$1\frac{1}{8}$	—	—	—	—	—	—	—	2″ S/track
1	C.I.	$3\frac{5}{8}$	$\frac{5}{16}$	$1\frac{1}{16}$	$4\frac{9}{16}$	6.0	5.715	$\frac{5}{8}$	$1\frac{13}{16}$	$\frac{1}{8}$	$1\frac{1}{16}$	$1\frac{1}{8}$	$\frac{7}{8}$	$\frac{3}{4}$NF.	$1\frac{1}{8}$	5	28	11	27	12	3.955	$\frac{7}{8}$	5″x$2\frac{1}{2}$″
2	C.I.	$4\frac{1}{4}$	$\frac{5}{16}$	$1\frac{1}{4}$	$5\frac{1}{4}$	$6\frac{3}{8}$	6.300	$\frac{5}{8}$	2	$\frac{1}{8}$	$1\frac{3}{8}$	$1\frac{7}{16}$	$1\frac{1}{16}$	1NF.	$1\frac{1}{4}$	5	31	11	30	12	4.245	$1\frac{1}{4}$	7″x$3\frac{1}{2}$″
2	CS/SG	$4\frac{1}{4}$	$\frac{5}{16}$	$1\frac{1}{4}$	$5\frac{1}{4}$	—	6.300	$\frac{5}{8}$	2	$\frac{1}{8}$	$1\frac{3}{8}$	$1\frac{7}{16}$	$1\frac{1}{16}$	1NF.	$1\frac{1}{4}$	8			49	13	3.910	$\frac{3}{4}$	7″x$3\frac{1}{2}$″
3–4	C.I.	$5\frac{5}{16}$	$\frac{5}{16}$	$1\frac{7}{16}$	$6\frac{1}{4}$	$8\frac{1}{4}$	8.340	$\frac{11}{16}$	$2\frac{5}{16}$	$\frac{1}{8}$	$1\frac{5}{8}$	$1\frac{3}{16}$	$1\frac{3}{8}$	$1\frac{1}{4}$NF.	$1\frac{1}{2}$	5	39	12	40	12	5.265	$1\frac{1}{4}$	8″x4″
3–5	CS/SG	$5\frac{5}{16}$	$\frac{5}{16}$	$1\frac{7}{16}$	$6\frac{1}{4}$		8.340	$\frac{11}{16}$	$2\frac{5}{16}$	$\frac{1}{8}$	*)	$1\frac{31}{32}$	$1\frac{1}{2}$	$1\frac{1}{4}$NF.	$1\frac{3}{4}$	5			40	12	5.265	$1\frac{1}{4}$	8″x4″
5–6	C.I.	$6\frac{3}{8}$	$\frac{3}{8}$	$1\frac{11}{16}$	$7\frac{1}{2}$	$8\frac{9}{16}$	8.635	$\frac{13}{16}$	$2\frac{3}{4}$	$\frac{1}{8}$	$1\frac{3}{4}$	$1\frac{7}{8}$	$1\frac{3}{8}$	$1\frac{1}{8}$NF.	$1\frac{3}{4}$	5	41	12	42	12	5.415	$1\frac{3}{8}$	10″x$4\frac{1}{2}$″
5–6	CS/SG	$6\frac{3}{8}$	$\frac{3}{8}$	$1\frac{11}{16}$	$7\frac{1}{2}$	—	8.635	$\frac{13}{16}$	$2\frac{3}{4}$	$\frac{1}{8}$	*)	$2\frac{9}{16}$	$1\frac{11}{16}$	$1\frac{1}{2}$NF.	2	5	—	—	42	12	5.415	$1\frac{3}{8}$	10″x$4\frac{1}{2}$″
8–10–12	C.I.	8	$\frac{1}{2}$	$1\frac{7}{8}$	9	$10\frac{5}{8}$	10.300	1	$3\frac{1}{16}$	$\frac{1}{8}$	$2\frac{7}{16}$	$2\frac{9}{16}$	2	$1\frac{3}{4}$NF.	3	4(5)	40	9	50	12	6.250	$1\frac{7}{8}$	12″x5″
8–10–12	CS/SG	$6\frac{3}{8}$	$\frac{1}{2}$	$1\frac{7}{8}$	$7\frac{1}{2}$		8.635	$\frac{7}{8}$	$3\frac{1}{16}$	$\frac{1}{8}$	$2\frac{7}{16}$	$2\frac{9}{16}$	2	$1\frac{3}{4}$NF.	3	5	—	—	42	12	5.415	$1\frac{7}{8}$	10″x6″
15	C.I.	$9\frac{1}{4}$	$\frac{5}{8}$	$2\frac{7}{16}$	$10\frac{1}{2}$	—	11.720	1	$3\frac{5}{8}$	$\frac{3}{16}$	$2\frac{3}{4}$	$2\frac{7}{8}$	$2\frac{1}{8}$	2NF.	$3\frac{1}{2}$	5	—	—	57	11	6.857	$1\frac{7}{8}$	20″x$6\frac{1}{2}$″
20	C.I.	$10\frac{1}{4}$	$1\frac{1}{16}$	$2\frac{7}{16}$	$11\frac{1}{2}$	—	12.743	$1\frac{1}{4}$	$3\frac{7}{8}$	$\frac{3}{16}$	$3\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{5}{16}$	$2\frac{1}{2}$NF.	4	$3\frac{1}{2}$	—	—	43	8	7.286	$1\frac{7}{8}$	22″x7″

* Plain wheels here are fitted with geared wheel axle. For cranes the plain wheels always are fitted with the geared wheel axle.
All trolley wheels are fitted with ball bearings.
When selecting wheels for cranes it is necessary to take into account the weight of the crane (half weight on each end) and all relevant factors as per SAA Crane and Hoist Code No. CB2-1960.
NOTE: S.G.—Spheroidal Graphite Iron. C.S.—Cast Steel. M.S.—Mild Steel.

TROLLEY SIDE PLATES
(DRILLING DETAILS)

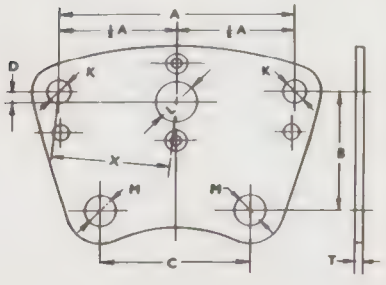


FIG. 5. SIDE PLATE FOR GEARED WHEELS.

Capacity in tons on 4 Wheels	PLATE FOR PLAIN & GEARED SIDE WHEELS (fig. 5)											
	Gear Side A ins.	Gear Side B ins.	Plain Side A ins.	Plain Side B ins.	C ins.	D ins.	Gear T ins.	Plain T ins.	L ins.	X ins.	K ins.	M ins.
$\frac{1}{4}$	—	—	$3\frac{1}{4}$	$2\frac{1}{8}$	$3\frac{1}{4}$	—	—	—	—	—	$\frac{33}{64}$	$\frac{33}{64}$
$\frac{1}{2}$	—	—	4	$3\frac{1}{4}$	$3\frac{3}{4}$	—	—	—	—	—	$\frac{3}{4}$	$\frac{3}{4}$
1	$7\frac{7}{8}$	4	$5\frac{1}{2}$	$4\frac{1}{8}$	5	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{5}{16}$	$1\frac{3}{8}$	3.955	$\frac{3}{4}$	$1\frac{1}{64}$
2	8.27	$4\frac{7}{8}$	6	$4\frac{7}{8}$	$5\frac{3}{4}$	$\frac{61}{64}$	$\frac{1}{2}$	$\frac{7}{16}$	$1\frac{3}{8}$	4.245	1	$1\frac{17}{64}$
3	10.016	$5\frac{1}{2}$	7	$5\frac{1}{2}$	$6\frac{1}{2}$	$1\frac{5}{64}$	$\frac{5}{8}$	$\frac{1}{4}$	$1\frac{3}{8}$	5.265	$1\frac{1}{8}$	$1\frac{33}{64}$
4–5–6	$10\frac{1}{8}$	$6\frac{1}{2}$	$8\frac{1}{8}$	$6\frac{1}{2}$	$7\frac{1}{8}$	$1\frac{21}{32}$	$\frac{3}{4}$	$\frac{5}{8}$	$1\frac{3}{8}$	5.415	$1\frac{1}{8}$	$1\frac{25}{32}$
8	12	$8\frac{7}{16}$	—	—	11	$1\frac{3}{4}$	$\frac{7}{8}$	$\frac{3}{4}$	$1\frac{5}{8}$	6.250	$1\frac{25}{32}$	$1\frac{25}{32}$
10	12	$9\frac{1}{8}$	—	—	12	$1\frac{3}{4}$	1	$\frac{7}{8}$	$1\frac{5}{8}$	6.250	$1\frac{25}{32}$	$1\frac{25}{32}$
15	13.26	$9\frac{3}{4}$	—	—	13.26	$1\frac{3}{4}$	1	$\frac{7}{8}$	$1\frac{5}{8}$	6.857	$2\frac{1}{32}$	$2\frac{1}{32}$
20	13.042	10	—	—	13.042	$3\frac{1}{4}$	1	1	$1\frac{5}{8}$	7.286	$2\frac{9}{16}$	$2\frac{9}{16}$

"ANCHOR" HAND CHAIN WHEELS

Anchor Hand Wheels are of cast iron. They can be supplied with standard bore to suit Anchor Trolleys, also unmachined with solid boss or can be machined (bored and slotted) for particular requirements.

L247

FIG. 1

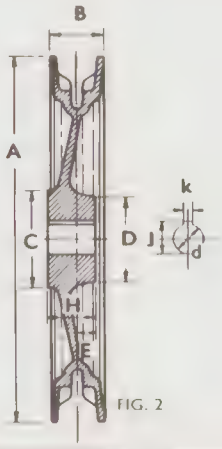


FIG. 2

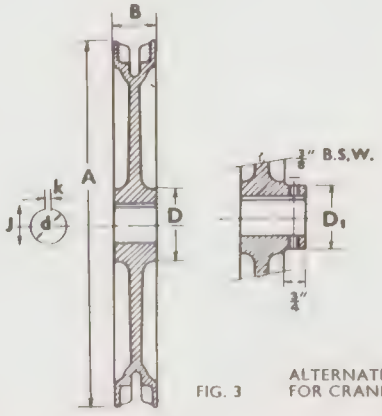
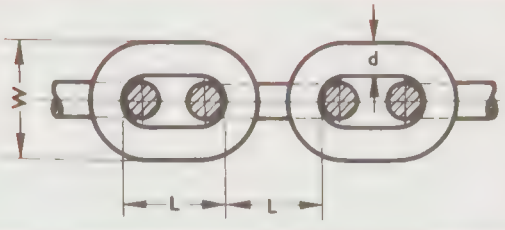


FIG. 3 ALTERNATIVE BOSS FOR CRANE KITS

HAND WHEELS—FIG. 2

O. dia. A	B	C	D	D_1	E	H	Standard Size d	Standard Size k	Standard Size J	Chain	No. of pockets N
$6\frac{7}{8}$" *	$1\frac{1}{4}$"	$1\frac{3}{8}$"	$1\frac{3}{8}$"	—	$\frac{1}{4}$"	1"	$\frac{7}{8}$"	$\frac{1}{4}$"	1"	$\frac{7}{32}$"	11
$8\frac{1}{8}$"	$1\frac{7}{16}$"	3"	$1\frac{3}{8}$"	—	$\frac{1}{2}$"	$1\frac{3}{16}$"	$\frac{7}{8}$"	$\frac{1}{4}$"	1"	$\frac{7}{32}$"	13
$10\frac{1}{2}$"	$1\frac{5}{8}$"	$2\frac{1}{2}$"	$2\frac{1}{2}$"	—	$\frac{1}{2}$"	$1\frac{5}{16}$"	$\frac{7}{8}$"	$\frac{1}{4}$"	1"	$\frac{1}{4}$"	13
13"	$1\frac{1}{2}$"	$2\frac{1}{2}$"	$2\frac{1}{2}$"	$2\frac{1}{4}$"	$\frac{3}{4}$"	$1\frac{1}{2}$"	$\frac{7}{8}$"	$\frac{1}{4}$"	1"	$\frac{1}{4}$"	18
15"	$1\frac{1}{2}$"	$2\frac{3}{4}$"	$2\frac{3}{4}$"	$2\frac{1}{2}$"	$\frac{3}{4}$"	$1\frac{1}{2}$"	$\frac{7}{8}$"	$\frac{1}{4}$"	1"	$\frac{1}{4}$"	21
18"	$1\frac{5}{8}$"	$2\frac{3}{4}$"	$2\frac{3}{4}$"	—	$\frac{7}{8}$"	$1\frac{1}{2}$"	$\frac{7}{8}$"	$\frac{1}{4}$"	1"	$\frac{1}{4}$"	25
24"	$1\frac{5}{8}$"	$2\frac{3}{4}$"	$2\frac{3}{4}$"	—	$1\frac{5}{8}$"	$2\frac{1}{2}$"	$1\frac{1}{8}$"	$\frac{1}{4}$"	$1\frac{1}{4}$"	$\frac{1}{4}$"	34
30"	$1\frac{5}{8}$"	$4\frac{1}{2}$"	$4\frac{1}{2}$"	—	$1\frac{1}{2}$"	3"	$1\frac{1}{2}$"	$\frac{3}{8}$"	1.662"	$\frac{1}{4}$"	42

* These wheels available also with $\frac{1}{4}$" hand chain.
Hand Wheels, 13" & 15" dia. (fig. 3), can be supplied with the alternative boss suitable for fixing wheel in any position on a shaft.



Chain Type	Material	Nominal Size	S.W.L. Ton	Used for Chain Block Unit	Dimensions L	Dimensions W.	Dimensions D.	Number of Links per foot	Weight of 100 ft Chain in lbs
Hand Chain	M.S. to BS590	$\frac{7}{32}$" $\frac{1}{4}$"		$\frac{1}{2}$ & 1 t. block 2 t. block	0.817" 1.047"	0.7365" 0.875"	0.212" 0.250"	14.7 11.5	40 53
Load Chain	M.S. to BS 590	$\frac{5}{16}$" $\frac{3}{8}$" $\frac{7}{16}$" $\frac{9}{16}$"	$\frac{1}{2}$ 1 1 2	T.G., H.S., B T.G. T.G., A S	0.940" 1.052" 1.090" 1.563"	1.187" 1.250" 1.454" 1.872"	0.350" 0.388" 0.447" 0.562"	12.5 11 10.5 7.5	116 137 196 292
	Higher tensile steel to BS 1663	$\frac{9}{32}$" $\frac{3}{8}$" $\frac{1}{2}$"	$\frac{1}{2}$ 1 2	D, K, L E, J, M C, F, P	0.790" 1.095" 1.480"	0.875" 1.264" 1.625"	0.281" 0.382" 0.500"	15.2 11.0 8.1	74 135 239
	Alloy steel, Gr.80 to BS 3114	$\frac{1}{4}$" $\frac{11}{32}$"	$\frac{3}{4}$ $1\frac{1}{2}$	Lever block Lever block	$\frac{3}{4}$" $1\frac{1}{32}$"	0.812" 1.031"	$\frac{1}{4}$" $\frac{11}{32}$"	16 12	58 105

"ANCHOR" HAND OPERATED WINCHES TYPE HW-B

L248

Winches shown on Figs. 2, 3, 4, 5 are approved by the Department of Labour, Industry & Social Welfare, N.S.W.

1-cwt. Ratchet push type Winch
Not approved by the Department of Labour, Industry & Social Welfare, N.S.W.

FIG. 1

L249

1-cwt. load-brake Winch

FIG. 2

10-cwt. load-brake Winch L250

FIG. 3

20-cwt. load-brake Winch L251

Can be wall or floor mounted.

FIG. 4

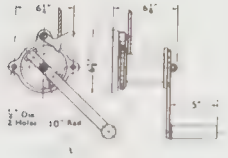


FIG. 1A

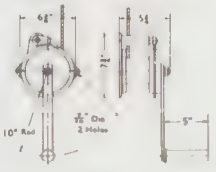


FIG. 2A

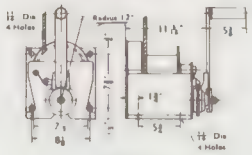


FIG. 3A

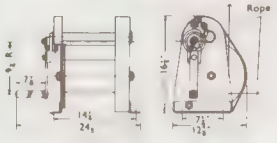


FIG. 4A

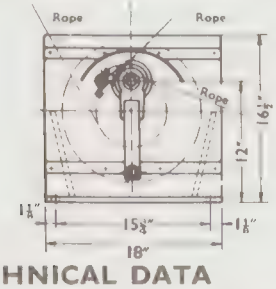
2 TON WINCH WITH AUTOMATIC LOAD BRAKE

This winch is available either with one or two drum speeds, also with possibility to leave the drum in neutral position for a free reeling of the rope.

The winch can be floor or wall mounting.

The change of drum speeds and disengagement of the drum (neutral position) is effected by pull or push of actuating rod (Fig. 3).

The winch can be supplied with 11″ rad. or 9″ rad. handle (see table below).



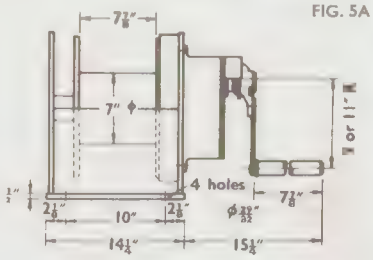


FIG. 5A

L252

FIG. 5

TECHNICAL DATA

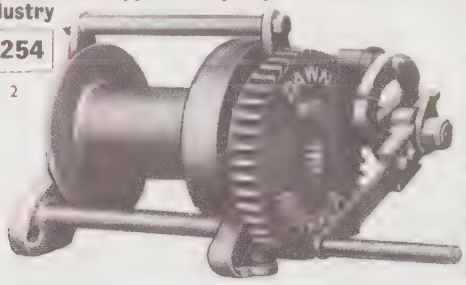
Winch capacity tons		Rope dia.	Drum				Max. effort on handle		No. of turns of handle for 1 ft. lift		Weight
Low speed	High speed		Dia.	Length	Flange dia.	Rope length cap.	11″ rad.	9″ rad.	Low speed	High speed	
2	½	11/16″	7″	7⅞″	14″	100 ft.	40 lbs.	50 lbs.	35–15	9–5	330 lbs.

"DAWN" ALL STEEL HAND WINCHES

No. 2 & No. 5 approved by Dept. of Labour & Industry

L254

No. 2



		L253 No. 5	No. 2	L255 No. 1
Capacity (S.W.L.)		55 Cwt.	25 Cwt.	10 Cwt.
Diameter of Drum		5⅝″	4″	3½″
Length of Drum		10″	8″	6″
Speed Ratio	high	4·3–1	4–1	Direct
	low	24–1	22–1	42–1
Drum Capacity 6/20 Wire R.		250 ft.	120 ft.	80 ft.
Rope Diameter		9/16″	⅜	5/16
Weight		134 lbs.	76 lbs.	40 lbs.
Dimensions		20″x17″x15″	15″x13″x11″	12″x9″x9″
Effort on handle		39 lbs.	37 lbs.	40 lbs.

CM PULLER Model B

Handle operated with Short Strokes as a ratchet. Has a finger lever to change from "UP" to "DOWN". Brake release button for "free wheeling".

Approved by the Department of Labour and Industry, N.S.W. and Victoria.

L256

¾ ton

L257

1½ Ton

L258

3 Ton

L259

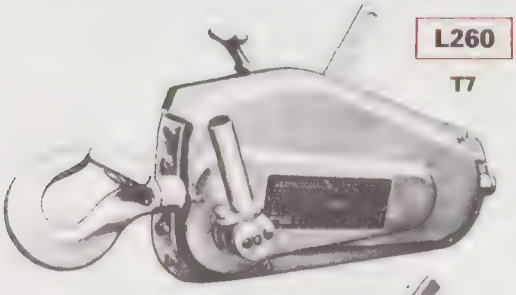
6 Ton

SPECIFICATIONS

Catalogue Number	Capacity	Standard Lift	Weight with Chain	Minimum Distance between Hooks	Maximum Effort on Lever	Length of Lever
L256	¾ ton	54″	14 lbs.	10¾″	58 lbs.	21¼″
L257	1½ ton	54″	24 lbs.	14¼″	83 lbs.	21¼″
L258	3 ton	54″	34 lbs.	17″	95 lbs.	21¼″
L259	6 ton	54″	65 lbs.	21⅜″	96 lbs.	21¼″

If a Higher than Standard Lift is required, the Puller will be supplied with Extra Long Chain.

"TIRFOR" FOR PULLING AND LIFTING

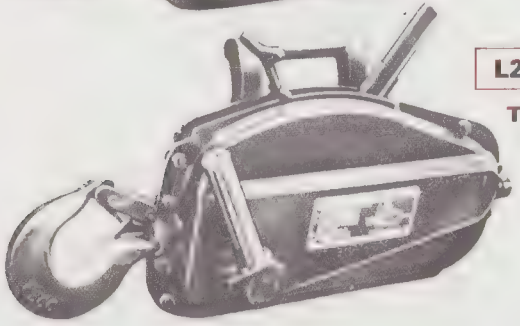


L260

T7

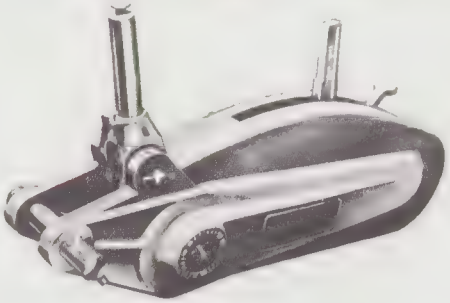
TECHNICAL DATA	T7	T13	T35
Capacity (SWL)	15 cwt.	30 cwt.	3 tons
Effort	60 lb.	77 lb.	70/120 lb.
	15 ft./min.	11½ ft./min.	3-9 ft./min.
Mechanical Advantage	30 : 1	43 : 1	85 : 1
Weight	13 lb.	39 lb.	59 lb.
Dimensions	20″ x 4″ x 8″	24″ x 6″ x 12″	28¼″ x 5½″ x 12½″
Length of Cable	66 ft.	66 ft.	33 ft.
End fitting	Safety hook	Safety hook	Shackle

Units are supplied complete with telescopic operating handle and stated length of cable wound on to carrying reel. Greater lengths can be supplied on request.



L261

T13



L262

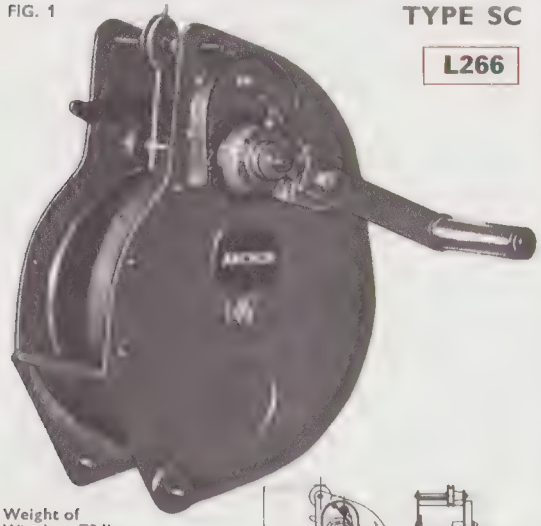
T35

"ANCHOR" SWINGING STAGE WINCHES

800 lbs. SWINGING STAGE WINCH TYPE SC

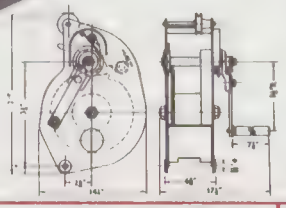
L266

FIG. 1



Weight of Winch — 70 lbs.
Weight of Iron — 42 lbs.
Max. theoretical effort on handle 40 lbs.
Turns of handle per foot of lift — from 10 to 5.

FIG. 2



The 800 lbs. Swinging stage Winch is an approved design,* for suspended scaffolding, generally termed as "Swinging Stage". The Winch consists of a drum capable of taking 160 ft. of $\frac{3}{8}$" steel wire rope, fitted with a ratchet attached to the drum, and pawl, and a set of spur gears. The pinion shaft has an automatic "Weston" type load brake and handle. When lifting the Stage the pawl freely clicks and no hand help is required. When lowering, the pawl shall be lifted by hand. This double security system guarantees the utmost safety. The winch has a suspension pin $\frac{3}{8}$" for the standard type of Stage. All shafts are fitted with sealed ball bearings packed with grease.

* Approved by the Department of Labour and Industry of N.S.W. and in all other States of Australia.

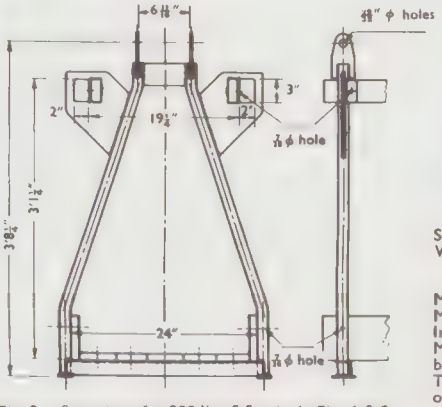
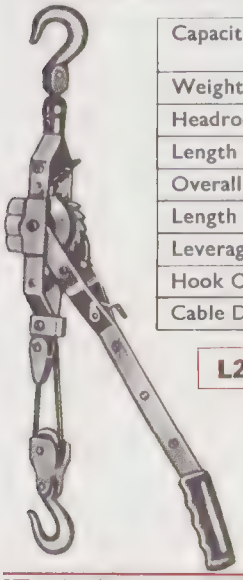


Fig. 3.—Stage iron for 800 lbs. S.S. winch. Fig. 1 & 2.

Swinging Stage Complete With Winches.

Maximum length platform 18 feet.
Maximum distance between Stage Irons 12 feet.
Maximum overhang ¼ of the distance between Stage Irons.
Timber required — straight grained oregon 6" x 1"—2 off; 4" x 1½"—2 off; 4½" x 1½"—3 off; 3" x 2"—2 off.

"MAASDAM" POW'R-PULL LEVER HOIST



Capacity:	Lifting Pulling	15 cwt. 2 tons
Weight:		8½ lbs.
Headroom:		24"
Length of Lift:		6 ft.
Overall Measurement:		26" x 4" x 2½"
Length of Handle:		19"
Leverage:		30.1
Hook Opening:		1"
Cable Diameter:		$\frac{3}{16}$"

L262 Model A-144 SB-6

"YALE" MODEL D LEVER HOIST

L259 ¾ Ton

L260 1½ Ton

L261 3 Ton

Capacity Tons	Standard Lift Inches	Overall Width Inches	Length of Lever Inches	Min. Distance Between Hooks Inches	Net Weight Std. Lift Lbs.	Standard Length of Chain Feet
¾	55	5 7/16	17½	13	15	5
1½	53	6⅛	17½	13	25	5
3	54	6⅛	17½	17	36	10

"ANCHOR" SPECIAL PURPOSE CLAMPS

L269

GIRDER CLAMPS TYPE FGC

Available sizes and capacities from stock.

Capacities and sizes not listed can be supplied on request.

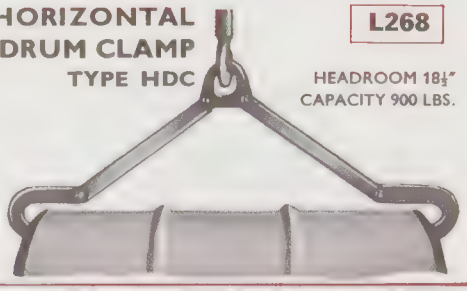
Girder clamp for suspension of blocks from R.S.J.'s.

Capacity	Girder Width	Headroom (Approx.)
½ to 2 ton	2½"—5½"	4½"
	5"—7"	4½"
3 to 4 ton	4"—7½"	6"
5 to 8 ton	4½"—8"	9¼"
	8½"—12"	9¼"
10 ton	6"—8"	10"
	8"—10"	10"
	11"—14"	10"

HORIZONTAL DRUM CLAMP TYPE HDC

L268

HEADROOM 18½" CAPACITY 900 LBS.



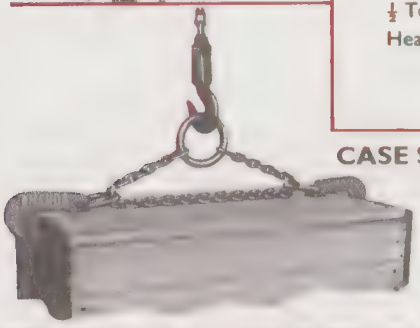
VERTICAL DRUM CLAMPS

L271

For Drums without lids
½ Ton Capacity
Headroom 20½"

L271/A For drums with lids 900 lbs. Capacity Headroom 6"

CASE SLING



L270

	¼" Chain			⅞" Chain			⅝" Chain		
Chain Angle	120°	90°	60°	120°	90°	60°	120°	90°	60°
Standard Width	2' 6"	2' 4"	2' 1"	3' 6"	3' 3"	2' 9"	4' 10"	4' 6"	3' 10"
Capacity (cwts.)	5½	8	10	11	16	20	19	27	33
Headroom H	1' 0"	1' 2"	1' 5"	2' 0"	2' 3"	2' 8"	2' 1"	2' 6"	2' 11"

Heavier Slings up to 5-ton capacity are available to special order. Longer slings can be supplied for wider cases

"HOLZIT" SAFETY HAND GRIPS

A - SINGLE POSITION SERIES

L272 **HOLZIT No. 1**

For handling boiler plate, Sheet metal pipe or steel shapes.
Maximum capacity: 1¼"
(for wider capacity see No. 4 and 6)
Weight: 1 lb. 4 oz.

L273 **HOLZIT No. 2**

With rounded jaws for bags, carpets, leather, plastics or sheet metal.
Maximum capacity: ⅝"
Weight: 1 lb. 5 oz.

B — MULTIPLE POSITION SERIES

Quick setting jaw adjustment provide varied gripping positions

L274

HOLZIT No. 3
Used for bars, re-enforcing steel, concrete or steel pipe.
Capacity: 1⅝" to 4 5/16"
Weight: 1 lb. 14 oz.

L275

HOLZIT No. 4
For steel plate, concrete slabs, or steel shapes.
Capacity: ¼" to 1⅞"
Weight: 1 lb. 12 oz.

L276

HOLZIT No. 5
For larger pipe, timbers, or concrete blocks.
Jaw capacity: 3 9/16" to 7⅞"
Weight: 2 lb. 2 oz.

L277

HOLZIT No. 6
For parallel side loads as timbers or steel beams.
Jaw capacity: 2 3/16" to 6¾"
Weight: 1 lb. 14 oz.

L278

HOLZIT No. 7
Designed for sheet metal, plastic or plywood.
Maximum capacity: ⅞"
Weight: 1 lb. 10 oz.

L279

HOLZIT No. 8
Used for rope, wire, rods, small pipe or tubing, etc.
Capacity: ⅜" to ⅞"
Weight: 1 lb. 10 oz.

RENFROE SAFETY SNAP LOCK DRUM CLAMPS

MODELS 300S AND 450M

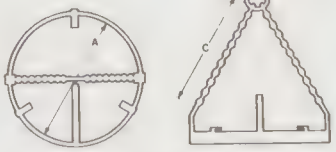
The MODELS 300S and 450M are designed for the vertical lifting and transportation of drums. Equipped with a past-center, safety locking device, the clamp secures tightly to the drum, preventing accidental release during positioning. The MODEL 300S, designed for lifting single drums only, will swiftly and safely place or remove a drum from, or into the center of a stack. The MODEL 450M consists of three MODEL 300S clamps linked together, allowing three drums to be lifted at once.

SPECIFICATIONS (in inches)

Model	Size of Lifting Capacity	A Drum Dia.	C Stand-ard	D Standard	Weight
300S	3000 lbs.	$23\frac{1}{2}$	$17\frac{1}{2}$	6″ x 9″ x 3″	25
300S	3000 lbs.	$16\frac{1}{2}$	$17\frac{1}{2}$	6″ x 9″ x 3″	23
450M	9000 lbs.	$23\frac{1}{2}$	24	6″ x 9″ x 3″	75
450M	9000 lbs.	$16\frac{1}{2}$	24	6″ x 9″ x 3″	70

Specifications are subject to change without notice.

ALLOY CHAIN AND RING



"RENFROE" SAFETY LOCKING BEAM CLAMP

The MODEL B-1 is intended for use on American or Universal Beams and Australian R.S.J. Sections whereas the MODEL A-1 is designed for use on channel or angle shapes only.

SAFETY FACTOR 5 to 1

MODEL A-1 For Angle and Channel

SAFETY FACTOR 5 to 1

MODEL B-1 For American Standard or Wide Flange

For UNIVERSAL BEAMS and COLUMNS

MODEL A-1—SPECIFICATIONS (in inches)

Tonnage	A Flange Width	B	C	D	E	F	G	Weight
1	0-4	6	$8\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	5	13
	0-8	$6\frac{1}{2}$	13	$8\frac{3}{4}$	$1\frac{1}{2}0$	$1\frac{1}{2}$	$5\frac{1}{2}$	15
3	0-4	$6\frac{1}{2}$	$9\frac{1}{4}$	$11\frac{1}{4}$	2 0	2	$5\frac{1}{2}$	22
	0-8	7	$15\frac{1}{4}$	$11\frac{1}{4}$	2 0	2	6	27
5	0-4	$7\frac{3}{4}$	$9\frac{3}{4}$	$11\frac{1}{4}$	2 0	2	$6\frac{1}{2}$	30
	0-8	$8\frac{1}{4}$	$16\frac{5}{8}$	$11\frac{1}{4}$	2 0	2	7	36

Specifications are subject to change without notice.

MODEL B-1—SPECIFICATIONS (in inches)

Tonnage	A Flange Width	B	C	D	E	F	Weight
1	$1\frac{1}{2}$-4	$4\frac{7}{8}$	$7\frac{3}{4}$	$8\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	9
	2-6	$5\frac{1}{8}$	$9\frac{3}{4}$	$8\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	10
	4-12	6	18	$8\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	19
3	3-6	$6\frac{1}{4}$	$10\frac{3}{8}$	$11\frac{1}{4}$	$1\frac{3}{4}$	2	20
	4-12	$7\frac{1}{4}$	$18\frac{3}{4}$	$11\frac{1}{4}$	$1\frac{3}{4}$	2	38
5	4-8	$6\frac{1}{4}$	15	$11\frac{1}{4}$	$1\frac{3}{4}$	2	45
	4-14	$7\frac{3}{4}$	$21\frac{1}{2}$	$11\frac{1}{4}$	$1\frac{3}{4}$	2	62
8	6-12	$11\frac{1}{2}$	$19\frac{1}{2}$	$19\frac{1}{2}$	$3\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	96
	6-17	$12\frac{3}{4}$	$26\frac{3}{4}$	$19\frac{1}{2}$	$3\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	151
	6-24	$13\frac{3}{4}$	$35\frac{1}{2}$	$19\frac{1}{2}$	$3\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	207
12	6-12	12	21	21	$3\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	98
	6-17	$13\frac{1}{4}$	$28\frac{1}{4}$	21	$3\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	153
	6-24	$14\frac{1}{4}$	$36\frac{1}{2}$	21	$3\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	209

When ordering, specify model, lifting capacity, and "A" flange width. Other Flange capacities are available upon special request.

AUSTRALIAN B-1

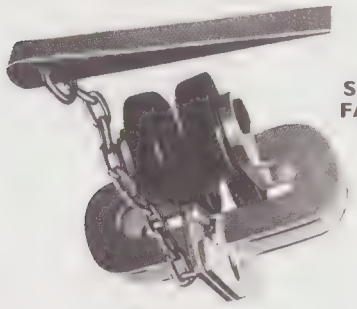
SPECIFICATIONS (in inches) to suit Australian Standard R.S.J.

Tonnage	A Flange Width	B	C	D	E	F	Weight
1	$1\frac{3}{4}$-$2\frac{1}{2}$	$5\frac{1}{4}$	$6\frac{3}{4}$	$8\frac{3}{4}$	2	$1\frac{3}{4}$	9
	3-6	$6\frac{1}{4}$	$10\frac{1}{4}$	$8\frac{3}{4}$	2	$1\frac{3}{4}$	10
	6-8	$7\frac{7}{8}$	$17\frac{1}{4}$	$8\frac{3}{4}$	2	$1\frac{3}{4}$	19
3	3-6	$6\frac{1}{4}$	$10\frac{1}{2}$	$11\frac{1}{4}$	$2\frac{3}{4}$	$2\frac{3}{16}$	20
	6-8	8	$14\frac{3}{4}$	$11\frac{1}{4}$	$2\frac{3}{4}$	$2\frac{3}{16}$	38
5	4-6	$13\frac{1}{8}$	$12\frac{1}{2}$	$11\frac{1}{4}$	3	$3\frac{1}{8}$	45
	6-8	$13\frac{1}{8}$	$14\frac{1}{2}$	$11\frac{1}{4}$	3	$3\frac{1}{8}$	62

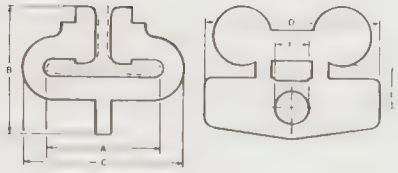
NOTE: 8 TON AND 12 TON CAPACITY FOR 6″ — 8″ FLANGE WIDTH.

RENFROE SAFETY LOCKING BEAM TROLLEY CLAMP

MODEL B-2
Wedge Assembly Optional
For UNIVERSAL BEAMS and COLUMNS



SAFETY FACTOR 5 to 1



MODEL B-2—SPECIFICATIONS (in inches)

Tonnage	A Flange Width	B	C	D	E	F	Weight
1	3-6	$7\frac{1}{4}$	$9\frac{3}{4}$	$8\frac{3}{4}$	$2\frac{1}{4}$	$1\frac{1}{2}$	26
	4-12	8	18	$8\frac{3}{4}$	$2\frac{1}{4}$	$1\frac{1}{2}$	34
3	3-6	10	$10\frac{3}{8}$	$11\frac{1}{4}$	$2\frac{1}{2}$	2	53
	4-12	12	$18\frac{3}{4}$	$11\frac{1}{4}$	$2\frac{1}{2}$	2	73
5	4-8	11	15	$11\frac{1}{4}$	$2\frac{1}{2}$	2	92
	4-14	13	$21\frac{1}{2}$	$11\frac{1}{4}$	$2\frac{1}{2}$	2	103
8	6-12	$16\frac{3}{4}$	$19\frac{1}{2}$	$19\frac{1}{2}$	$4\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	256
	6-17	18	$26\frac{3}{4}$	$19\frac{1}{2}$	$4\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	270
	6-24	19	$35\frac{1}{2}$	$19\frac{1}{2}$	$4\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	295
12	6-12	$18\frac{1}{2}$	21	21	$4\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	275
	6-17	$19\frac{3}{4}$	$28\frac{1}{4}$	21	$4\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	295
	6-24	$20\frac{3}{4}$	$36\frac{1}{2}$	21	$4\frac{3}{4}$	$3\frac{1}{2} \times 4\frac{3}{4}$	345

AUSTRALIAN B-2

SPECIFICATIONS (in inches) to Suit Australian Standard R.S.J.

Tonnage	A Flange Width	B	C	D	E	F	Weight
1	$1\frac{3}{4}$-$2\frac{1}{2}$	$7\frac{3}{4}$	$8\frac{1}{2}$	$8\frac{3}{4}$	$2\frac{3}{4}$	$1\frac{3}{4}$	22
	3-6	$8\frac{1}{8}$	$9\frac{3}{4}$	$8\frac{3}{4}$	$2\frac{3}{4}$	$1\frac{3}{4}$	26
	6-8	$8\frac{1}{8}$	$13\frac{1}{2}$	$8\frac{3}{4}$	$2\frac{3}{4}$	$1\frac{3}{4}$	34
3	3-6	10	$10\frac{1}{2}$	$11\frac{1}{4}$	$3\frac{1}{2}$	$2\frac{3}{16}$	53
	6-8	10	16	$11\frac{1}{4}$	$3\frac{1}{2}$	$2\frac{3}{16}$	73
5	4-6	$12\frac{3}{4}$	16	$11\frac{1}{4}$	$3\frac{3}{4}$	$3\frac{1}{8}$	92
	6-8	$12\frac{3}{4}$	16	$11\frac{1}{4}$	$3\frac{3}{4}$	$3\frac{1}{8}$	103

NOTE: 8 TON AND 12 TON CAPACITY FOR 6" — 8" FLANGE WIDTH.

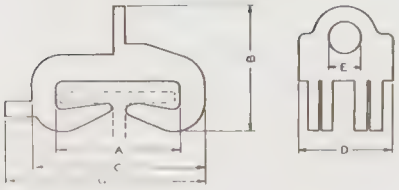
MODEL PB HINGED BEAM CLAMP SAFETY LOCKING

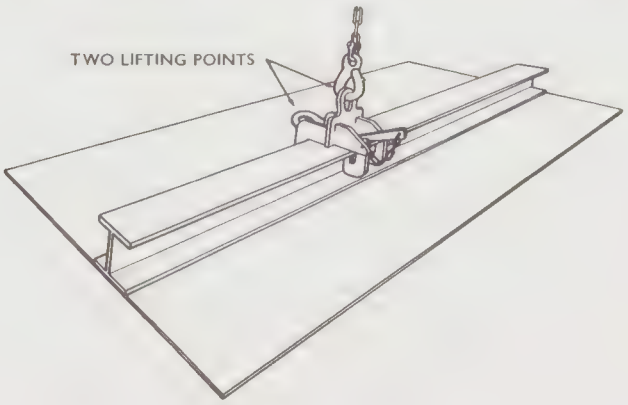
SAFETY FACTOR 5 to 1

The Model PB is a portable beam clamp designed for safe quick attachment to beams and girders to be used in general rigging of chain falls, hoists and for lifting fabricated sections. The clamp hinges in two sections allowing quick installation. A fluted tool steel locking wedge applied between the clamp and the beam creates a positive lock in excess of rated capacity. Two lifting eyes allow the load to be picked up from vertical or horizontal positions. The clamp is of single unit construction and fits a wide range of flange widths.

Tonnage	A Flange Capacity	B	C	D	E	F	G	Weight
5	4-8	$10\frac{1}{2}$	13	7	$2\frac{1}{2}$	7	$15\frac{1}{4}$	—

MODEL PB



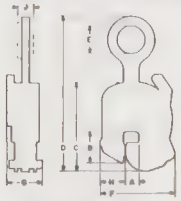


RENFROE LIFTING CLAMPS

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

MODEL S — Safety Snap Lock Clamp

The MODEL S clamp has a lock open and lock closed feature which permits clamp removal from the steel relieving riggers from having to climb into dangerous positions. The swivel jaw permits the load to swing when necessary without danger of its walking off the load.



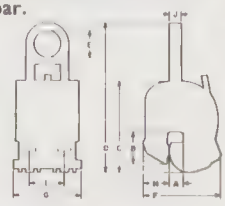
SAFETY FACTOR 5 to 1

MODEL S — SPECIFICATIONS (in inches)

Tonnage	A Jaw Opening	B	C	D	E	F	G	H	J	Weight
2	0-1	3½	9½	17	3½	7½	3½	2⅛	¾	31
	¾-1½	3½	9½	17	3½	8	3½	2⅛	¾	32
	1¼-2	3½	9½	17	3½	8½	3½	2⅛	¾	33
	1¾-2¼	3½	9½	17	3½	9	3½	2⅛	¾	36
4	0-1¼	4½	11½	19½	3½	8¾	4½	3	¾	41
	1-2	4½	11½	19½	3½	9½	4½	3	¾	43
	1¾-2¾	4½	11½	19½	3½	10¼	4½	3	¾	47
	2½-3½	4½	11½	19½	3½	11	4½	3	¾	52
	3¼-4¼	4½	11½	19½	3½	11¾	4½	3	¾	60
8	0-1½	4½	13¾	22½	3½	9½	5	3⅛	1½	70
	1-2	4½	13¾	22½	3½	10	5	3⅛	1½	73
	2-3	4½	13¾	22½	3½	11	5	3⅛	1½	77
	2¾-4	4½	13¾	22½	3½	12	5	3⅛	1½	81
	3¾-5	4½	13¾	22½	3½	13	5	3⅛	1½	85
12	0-2½	6¼	18	28	3½	12	6½	3⅝	2	138
	2-4	6¼	18	28	3½	13½	6½	3⅝	2	143
	4-6	6¼	18	28	3½	15½	6½	3⅝	2	150
	5½-7½	6¼	18	28	3½	17	6½	3⅝	2	160
20	½-3	7½	22	31¼	3½	15¼	8	4⅛	2½	265
	3-5	7½	22	31¼	3½	17	8	4⅛	2½	294
	5-7	7½	22	31¼	3½	19	8	4⅛	2½	324
	7-9	7½	22	31¼	3½	21	8	4⅛	2½	350
50	⅛-3	8½	25½	39	3½	22	9	6⅝	2½	470
100	⅛-3	13½	34	44	3½	26	12½	10½	4	1350

MODEL SD
Safety Snap Lock Clamp — Heavy Duty

The MODEL SD incorporates two MODEL S clamps into one and is designed for extra heavy duty work where it is desirous to spread the gripping surface with two points of contact. A single locking lever actuates both safety lock assemblies in open and closed positions. This clamp is designed to be used in pairs attached to a spreader bar.



SAFETY FACTOR 5 to 1

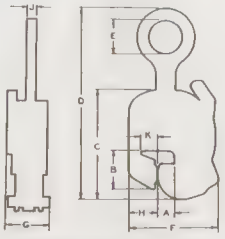
MODEL SD — SPECIFICATIONS (in inches)

Tonnage	A Jaw Opening	B	C	D	E	F	G	H	I	J	Weight
6	0-1	3¼	9½	15½	3	7½	6½	2⅛	4⅛	¾	57
	¾-1½	3¼	9½	15½	3	8	6½	2⅛	4⅛	¾	62
	1¼-2	3¼	9½	15½	3	8½	6½	2⅛	4⅛	¾	64
	1¾-2½	3¼	9½	15½	3	9	6½	2⅛	4⅛	¾	67
8	0-1¼	4½	11½	17	3	8¾	6¾	3	4¼	1	77
	1-2	4½	11½	17	3	9½	6¾	3	4¼	1	81
	1¾-2¾	4½	11½	17	3	10¼	6¾	3	4¼	1	85
	2½-3½	4½	11½	17	3	11	6¾	3	4¼	1	89
	3¼-4¼	4½	11½	17	3	11¾	6¾	3	4¼	1	94

When ordering, specify model, lifting capacity, and "A" jaw opening. Other jaw openings available upon special request.

MODEL SX
Angle Clamp — Safety Snap Lock

SAFETY FACTOR 5 to 1



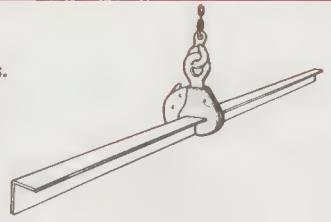
SAFETY FACTOR 5 TO 1

The Model SX is designed for the lifting and transporting of angles both in fabrication and erection of steel. Not only does it have a lock closed position but a lock open position permits it to be removed remotely without a worker having to climb into a dangerous position.

MODEL SK — SPECIFICATIONS (in inches)

Ton	A	B	C	D	E	F	G	H	J	K	Weight
2	1½	3⅜	9⅜	17	3¾	10¼	3½	4	¾	2½	34

Jaw Opening
3″ x 3″ x ⅝″ max. equal angle.
3½″ x 3½″ x ½″ max. for ½″ angles.

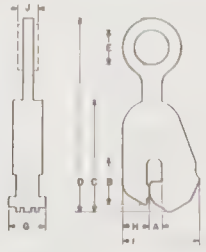


RENFROE LIFTING CLAMPS

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

MODEL FR — Safety Snap Lock Clamp

The MODEL FR possesses all the features of the MODEL S with the exception of the lock open feature. Designed for relatively light work, this clamp is small and easy to handle.



SAFETY FACTOR
5 to 1

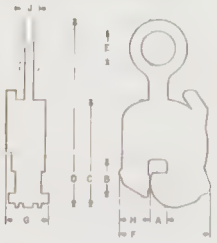
MODEL FR — SPECIFICATIONS (in inches)

Tonnage	A Jaw Opening	B	C	D	E	F	G	H	J	Weight
½	0-¾	2½	6¾	11¼	2¼	4⅜	2½	1¼	½	7
	½-1	2½	6¾	11¼	2¼	4⅝	2½	1¼	½	8
	¾-1¼	2½	6¾	11¼	2¼	4⅞	2½	1¼	½	9
	1-1½	2½	6¾	11¼	2¼	5⅛	2½	1¼	½	10
	1¼-1¾	2½	6¾	11¼	2¼	5⅜	2½	1¼	½	11
1	0-¾	2¾	8	13½	2½	5¼	2½	1½	⅝	13
	½-1	2¾	8	13½	2½	5½	2½	1½	⅝	14
	¾-1¼	2¾	8	13½	2½	5¾	2½	1½	⅝	15
	1-1½	2¾	8	13½	2½	6	2½	1½	⅝	16
	1¼-1¾	2¾	8	13½	2½	6¼	2½	1½	⅝	17
	1½-2	2¾	8	13½	2½	6½	2½	1½	⅝	18
2	0-1	3	9½	16	3	6⅛	3⅛	1⅞	¾	21
	¾-1½	3	9½	16	3	6⅝	3⅛	1⅞	¾	22
	1¼-2	3	9½	16	3	7⅛	3⅛	1⅞	¾	23
	1¾-2½	3	9½	16	3	7⅝	3⅛	1⅞	¾	24
3	0-1	3¾	10¾	16⅜	3⅝	7 9/16	3½	4⅛	¾	30
	¾-1½	3¾	10¾	16⅜	3⅝	8 1/16	3½	4⅛	¾	31
	1¼-2	3¾	10¾	16⅜	3⅝	8 9/16	3½	4⅛	¾	32
	1¾-2½	3¾	10¾	16⅜	3⅝	9 1/16	3½	4⅛	¾	33

MODEL FRD

Two Points of Contact Wide Spread

SAFETY FACTOR
1 to 5



MODEL FRD — SPECIFICATIONS (in inches)

Tonnage	A Jaw Opening	B	C	D	E	F	G	H	J	K	Weight
1	0-¾	2⅝	7¾	12¼	2⅜	4¾	5½	1½	⅝	3	16
2	0-¾	2¾	9	14½	2½	5¼	6	1½	⅝	3 1/16	26
4	0-1	3⅝	9½	17½	2¾	6⅜	7	2¼	¾	3¾	40
6	0-1⅜	4¼	11½	20	3⅛	7¼	7⅞	2	¾	4 1/16	58

When ordering, specify, lifting capacity, and "A" jaw opening.

MODEL HSM & HSMD

Horizontal Safety Clamp

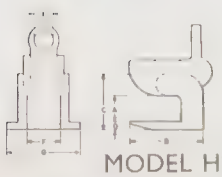
MODEL HSM

SAFETY FACTOR 5 to 1

MODEL HSM — SPECIFICATIONS (in inches)

Tonnage Per Pair	A Jaw Opening	B	C	D	E	G	Weight Per Pair
½	0-1	3½	3	½	1	2⅜	6
1	0-2	7 5/16	5 1/16	⅛	1⅜	5⅛	30
1½	0-2	7⅝	5⅛	¾	1⅜	5⅛	40
3	0-2	8	5¼	1	1⅜	6⅛	49
6	0-2	8	5¼	1⅞	1⅜	6⅛	54
8	0-3	8½	6½	2	1⅜	6⅛	96

The MODEL HSM horizontal lifting clamp is designed to be used in pairs, sets of pairs, or in a tripod arrangement for transporting steel plate horizontally. MODEL HSMD possesses dual cam assemblies which allow double purchase grip.



MODEL HSMD

SAFETY FACTORS 5 to 1

MODEL HSMD — SPECIFICATIONS (in inches)

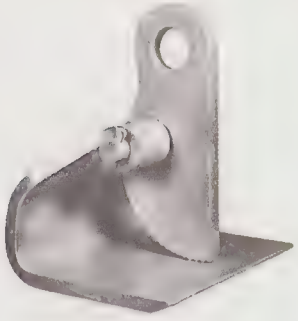
Tonnage Per Pair	A Jaw Opening	B	C	D	E	F	G	Weight Per Pair
3	0-2	7⅞	5¼	¾	3	5¼	10	97
6	0-2	8	5¼	1	3	5¼	12	116
12	0-2	8	5¼	1⅞	3	5¼	12	106
16	0-3	8½	6¼	2	3	5¼	12	206

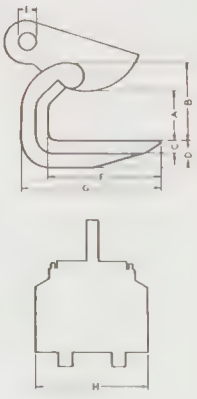
When ordering, specify model, lifting capacity, and "A" jaw opening. Other jaw openings available upon special request.

RENFROE LIFTING CLAMPS

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

MODEL H
Horizontal Clamp





SAFETY FACTOR 5 to 1

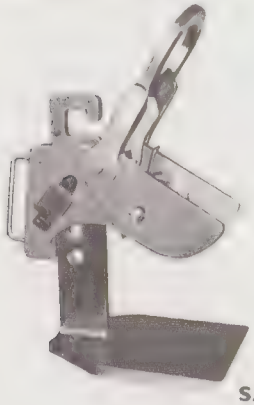
MODEL H — SPECIFICATIONS (in inches)

Ton Per Pair	A Jaw Opening	B	C	D	E	F	G	H	Weight Per Pair
1	0-2	4 3/8	1/2	*	1 5/16	5 1/2	6	7	30
1 1/2	0-2	4 3/8	5/8	*	1 5/16	5 1/2	6 1/8	7	34
3	0-2	4 3/8	3/4	*	1 5/16	5 1/2	6 1/4	7	42
6	0-2	4 3/8	1/2	1 1/2	1 5/16	5 1/2	7	7	48
8	0-3	5 3/4	3/4	2	1 3/8	8	10 1/4	7	94

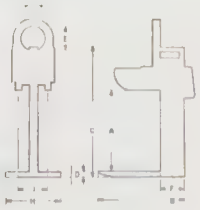
* No Backpad on 1, 1½ and 3-ton models.

The MODEL H horizontal lifting clamp of curved body construction is designed to be used in pairs, sets of pairs or in a tripod arrangement for transporting steel plate horizontally. Although intended for lifting plate in a horizontal position only, the gripping cam is so designed as to prevent side slip when the load is subjected to considerable tilting. Standard models are equipped with serrated gripping cams, however, smooth, bronze or stainless steel surfaces are available to prevent marring.

MODEL WHS
Adjustable Dual Horizontal Safety Clamp



ADJUSTABLE FOR VARIOUS THICKNESS



SAFETY FACTOR 5 to 1

MODEL WHS — SPECIFICATIONS (in inches)

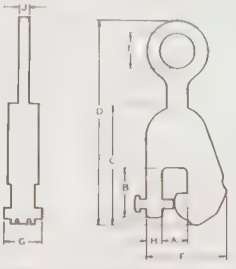
Tonnage Per Pair	A Jaw Opening	B	C	D	E	F	G	H	J	Weigh Each
1	0-6	10 1/2	16 1/2	5/8	3 1/2	3	1/2	8 1/4	4 1/2	45
	0-12	11 1/2	22 1/2	5/8	3 1/2	4	5/8	8 1/4	4 1/2	60
	0-16	12 1/2	28 1/2	5/8	3 1/2	5	3/4	8 1/4	4 1/2	80
3	0-6	10 1/2	16 1/2	1	3 1/2	3	3/4	8 1/4	4 1/2	65
	0-12	11 1/2	22 1/2	1	3 1/2	4	3/4	8 1/4	4 1/2	90
	0-16	12 1/2	28 1/2	1	3 1/2	5	3/4	8 1/4	4 1/2	103
6	0-6	10 1/2	16 1/2	2	3 1/2	3	1	8 1/4	4 1/2	70
	0-12	11 1/2	25 1/2	2	3 1/2	4	1	8 1/4	4 1/2	95
	0-16	12 1/2	30 1/2	2	3 1/2	5	1	8 1/4	4 1/2	112
12	0-6	12 1/2	16 1/2	3	3 1/2	3	1	8 1/4	5 1/2	123
	0-12	13 1/2	25 1/2	3	3 1/2	4	1	8 1/4	5 1/2	128
	0-16	13 1/2	30 1/2	3	3 1/2	6	1	8 1/4	5 1/2	154
16	0-6	12 1/2	16 1/2	4 1/2	3 1/2	6	1	8 1/4	5 1/2	165
	0-12	13 1/2	25 1/2	4 1/2	3 1/2	6	1	8 1/4	5 1/2	195
	0-16	13 1/2	30 1/2	4 1/2	3 1/2	6	1	8 1/4	5 1/2	220

NOTE: 12 and 16 ton — 2″ Hole Centers.
1, 3, and 6 ton — 1½″ Hole Centers.

The MODEL WHS is an adjustable, horizontal lifting clamp designed to be used in pairs, sets of pairs, or in a tripod arrangement for transporting steel plate horizontally. Jaw capacity adjustment from 0″ to 16″.

MODEL FRX
Safety Lock Screw Clamp

The Model FRX screw clamp is designed to handle steel of odd shaped configurations. A spring loaded positive lock prevents accidental release of the load.



SAFETY FACTOR 5 to 1

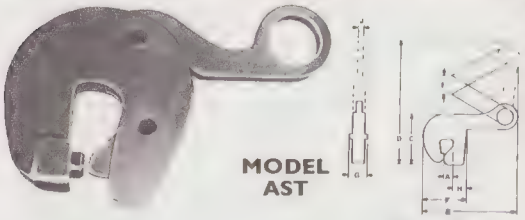
MODEL FRX — SPECIFICATIONS (in inches)

Ton	A Jaw Opening	B	C	D	E	F	G	H	J	Weight
1	0-2 3/4	3	8 1/8	13	2 1/2	8	2 1/2	1 1/2	5/8	16
1	0-5	3	8 1/8	13	2 1/2	10 1/4	2 1/2	3 3/4	5/8	19

RENFROE LIFTING CLAMPS

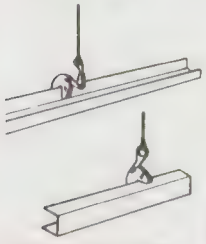
SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

MODEL AST & ASTL Structural Clamp



MODEL AST

SAFETY FACTOR 5 to 1



Channels can be lifted either vertically or horizontally, depending on the placement of the tool.

MODEL ASTL

MODEL ABA

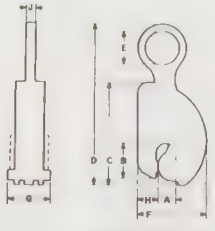
SAFETY FACTOR 5 to 1

SAFETY SNAP LOCK

Registered U.S. and foreign Patent Offices.

MODEL BD

SLOTTED CAM ACTION



SAFETY FACTOR 5 to 1

MODEL AST & ASTL — SPECIFICATIONS (in inches)

Tonnage	A Jaw Opening	B	C	D	E	F	G	H	J	Weight
AST ½	0-¾	10¼	6⅜	—	1¾	6	1½	2⅛	½	7
ASTL ½	0-¾	10¼	6⅜	14	1¾	6	1½	2⅛	½	9
AST 1½	0-¾	13	8½	—	2½	7	2¼	2¾	⅝	20
ASTL 1½	0-¾	13	8½	18½	2½	7	2¼	2¾	⅝	24
AST 3	0-1½	19¼	12	—	3	11	3	4⅜	¾	49
ASTL 3	0-1½	19¼	12	25	3	11	3	4⅜	¾	62

When ordering, specify model, lifting capacity, and "A" jaw opening. Other jaw openings available upon special request.

The MODEL AST is designed for lifting, turning, and stacking light beams and structural shapes.

The MODEL ASTL includes a linkage, permitting removal of the tool remotely by lifting the crane hook.

MODEL ABA — SPECIFICATIONS (in inches)

Tonnage	A Jaw Opening	B	C	D	E	F	G	H	I	Weight
½	0-¾	2¼	7	8½	2½	4½	2½	2¾	1½	7
1	0-1	2¾	10	10	2½	5	2½	5	1⅝	10
	¼-1½	2¾	10	10½	2½	5½	2½	5	1⅝	11
	1¾-2	2¾	10	11	2½	6	2½	5	1⅝	12
2	0-1¼	3¼	11	12	3	6¼	3½	5½	2	20
	1-2	3¼	11	12¾	3	7	3½	5½	2	22
	1¾-2¾	3¼	11	13½	3	7¾	3½	5½	2	24
4	0-1½	3¾	13	14	3½	8	4¼	6	2½	35
	1¼-2½	3¾	13	15	3½	9	4¼	6	2½	38
	2¼-3½	3¾	13	16	3½	10	4¼	6	2½	41
8	0-2	4½	16	17½	4	9	5¼	6	3	53
	1¾-3½	4½	16	19	4	10½	5¼	6	3	58
	3¼-5	4½	16	20½	4	12	5¼	6	3	63

If optional chain attachment is required, specify when ordering.

OPTIONAL CHAIN ATTACHMENT HOOK-UP — Fast — Safe!
Factory attached alloy chain, bull ring, and safety hook provides safe, time-saving hook-up. With this assembly no threading through shackle eye is required.

The MODEL ABA is designed for multi-purpose application where safety, versatility, and cost reduction is demanded. It is a safe, economical tool for handling fabricated sections and structural members either horizontally or vertically. In addition, the MODEL ABA serves as an ideal horizontal plate clamp.

MODEL BD — SPECIFICATIONS (in inches)

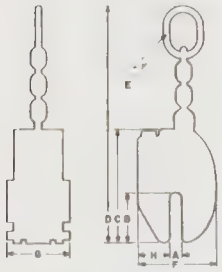
Tonnage	A Jaw Opening	B	C	D	E	F	G	H	J	Weight
½	0-1	2½	6¾	10½	1¾	4¼	2¼	1½	½	6
1	0-1 3/16	3	7¼	13	2¼	5	2¾	1¾	⅝	11
2	0-1⅜″	3½	8	14¾	3⅛	6⅜	3	2¼	⅝	14
4	0-1¾	3¾	10¼	18	3⅜	6¾	3⅜	2¼	¾	27
7	¼-2½	5	12¾	23	3⅞	9½	4⅝	3	1	65

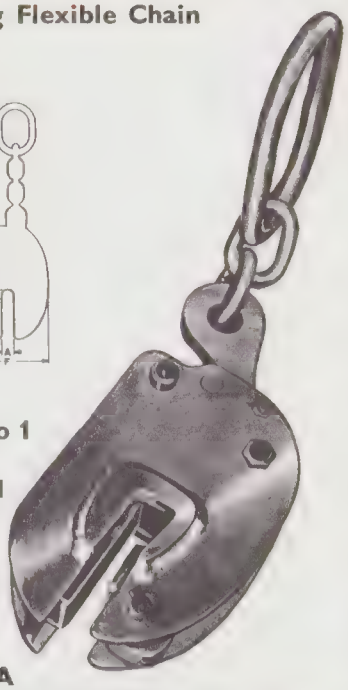
The MODEL BD is designed primarily for steel warehousing and bench work where a locking type clamp is not essential.

RENFROE LIFTING CLAMPS

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

MODEL NM
Non-Marring Flexible Chain Connection





SAFETY FACTOR 3 to 1
GRIP RATIO 6 to 1

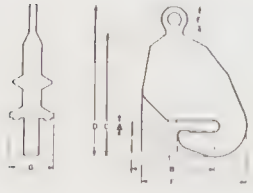
MODEL NM — SPECIFICATIONS (in inches)

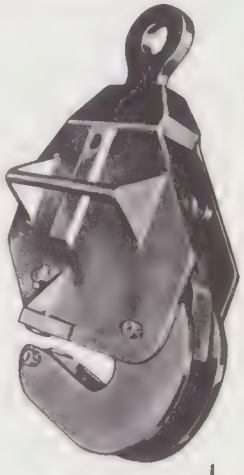
Tonnage	A Jaw Opening	B	C	D	E	F	G	H	Weight
1	0-¾	4½	10⅛	25½	3″ x 6″	5½	3⅛	2½	17
	¾-1¼	4½	10⅛	25½	3″ x 6	6	3⅛	2½	19
	1¼-1¾	4½	10⅛	25½	3″ x 6″	6½	3⅛	2½	21
	1¾-2¼	4½	10⅛	25½	3″ x 6″	7	3⅛	2½	23
2	0-1	5¼	11	26½	3″ x 6″	6½	3⅝	2¾	23
	¾-1½	5¼	11	26½	3″ x 6″	7	3⅝	2¾	25
	1¼-2	5¼	11	26½	3″ x 6″	7½	3⅝	2¾	28
	1¾-2½	5¼	11	26½	3″ x 6″	8	3⅝	2¾	30
	2¼-3	5¼	11	26½	3″ x 6″	8½	3⅝	2¾	33
4	¼-1½	5¼	13¾	32½	3½″ x 8″	7½	4⅜	3⅝	45
	1¾-3	5¼	13¾	32½	3½″ x 8″	9	4⅜	3⅝	50
	3-4¼	5¼	13¾	32½	3½″ x 8″	10¼	4⅜	3⅝	55
8	1¾-3½	10	21	45	6″ x 9″	12	4⅝	4¼	195
	3-4½	10	21	45	6″ x 9″	13	4⅝	4¼	210
	4-5½	10	21	45	6″ x 9″	14	4⅝	4¼	225
12	2-4	10	21	45	6″ x 9″	12½	6½	4¼	200
	3¾-5½	10	21	45	6″ x 9″	14	6½	4¼	220
	4½-6	10	21	45	6″ x 9″	14½	6½	4¼	240

When ordering, specify model, lifting capacity, and "A" jaw opening. Other jaw openings available upon special request.

The MODEL NM (non-marring) clamp is designed to lift, without marring, stainless steel, copper, aluminium, and other polished metals. The jaws have no teeth, as do most conventional type clamps, but are ground smooth. This clamp will handle as many sheets of lightly oiled, paper backed, or tapered stock as the jaws will accommodate.

MODEL SE-A
Safety Snap Lock Steel Erection Clamp





Safety Factor:
Horizontal Lift - 5 to 1
Vertical Lift - 3 to 1

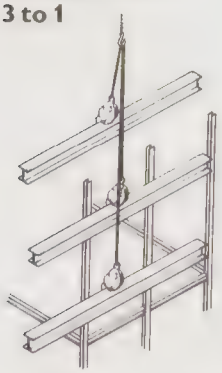
MODEL SE-A — SPECIFICATIONS (in inches)

Tonnage	A Jaw Opening	B Flange Width	C	D	E	F	G	Weight
1	0-¾	3-8	11½	15	1	9	5	22
2	0-1	5-12	15	20	1	11¾	6¾	54
4	0-1¼	7-14	20	27	1½	17	9	116
	¾-1¾	7-14	20½	27½	1½	17	9	120
8	0-1	10-20	25½	31	1¾	21½	9¾	200
	1-2½	10-20	26	31½	1¾	21½	9¾	204
15	¾-2¼	10-20	29	35	2	21½	11¼	343
	2-3¼	10-20	30	36	2	21½	11¼	350

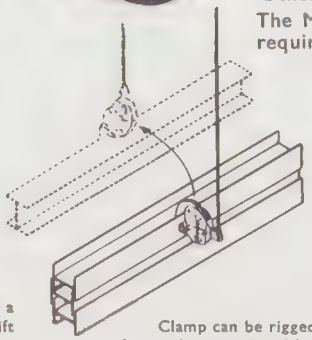
For lifting more than 15 ton loads, two clamps are recommended.
When ordering, specify model, lifting capacity, "A" jaw opening, and "B" flange width.

Other jaw openings and flange widths are available upon special request.

The MODEL SE-A Steel Erection clamp has been developed to satisfy rigid requirements for safe, efficient handling of structural steel in field erection.



Beams can be removed from a stack, turned to the proper lift position, and raised into position.



Clamp can be rigged for single or tandem lifts.

SAFETY REPAIR KIT

Renfroe Clamps are designed with replaceable parts, when necessary, these parts are easily replaced either by insalling separate replacement parts, or through use of a Renfroe Safety Repair Kit.

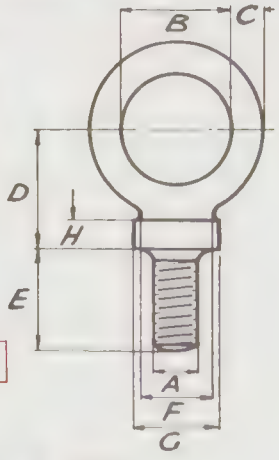
The Safety Repair Kit contains:
Lock Spring Assembly, Cam Assembly, Campin, Shackle Pin and Swivel Jaw.

Available for the following Models:

Model S	Model BD	Model SE-A
Model SD	Model NM	Model AST
Model FR	Model ABA	Model ASTL.

STANDARD DROP FORGED MILD STEEL DYNAMO EYEBOLTS

L280



DIMENSIONS IN INCHES

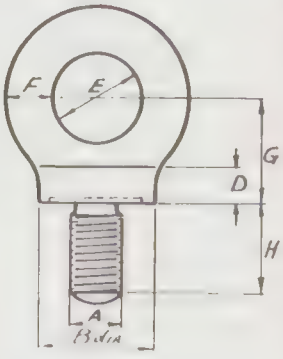
Vertical SWL Cwts.	A	B	C	D	E	F	G	H
2	¼	⅞	⅜	1 7/16	¾	⅜	¾	¼
3	5/16	⅞	⅜	1 7/16	¾	⅜	¾	¼
5	⅜	⅞	⅜	1 7/16	¾	⅜	¾	¼
10	½	1⅛	⅜	1⅜	1	½	1	5/16
16	⅝	1¼	½	1⅝	1⅛	⅝	1⅛	⅜
24	¾	1⅜	⅝	2⅛	1½	1 1/16	1⅜	7/16
32	⅞	1½	11/16	2¼	1⅜	1⅛	1½	½
44	1	2	¾	2½	1½	1¼	1⅝	½
56	1⅛	2⅜	1	3	2	1⅜	2	⅝
70	1¼	2⅝	1	3	2	1⅜	2	⅝
85	1⅜	3	1⅛	3½	2¼	1 13/16	2¼	11/16
100	1½	3	1⅛	3½	2¼	1 13/16	2¼	11/16
140	1¾	3	1¼	3⅞	2¾	2¼	2⅝	¾
180	2	4	1¾	5¼	3½	2⅜	3¼	⅞
300	2½	4½	2	5⅞	4⅞	3½	4	1⅛
440	3	5	2½	6	5	4	4½	1¼

NOTE: A = nominal size.

EYEBOLTS to B.S. 529

L281

STEEL EYEBOLTS WITH COLLARS

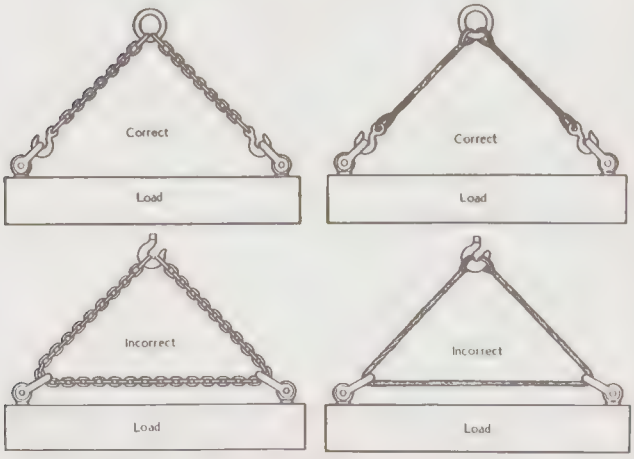


A	B	D	E	F	G	H
¼	⅜	5/16	7/16	½	¾	⅜
½	1⅛	⅜	¾	7/16	1	⅝
⅜	1 1/16	½	11/16	⅝	1¼	1 5/16
½	1 1/16	⅝	1⅛	¾	1½	1 7/16
⅝	1 3/16	¾	1 5/16	⅞	1¾	1 11/16
1	2¼	¾	1½	⅞	2	1⅞
1⅛	2 1/16	⅞	1 11/16	1	2¼	1 13/16
1¼	2 1/16	1⅛	1⅞	1 5/16	2½	2 5/16
1½	3⅜	1⅛	2¼	1 7/16	3	2⅜
1¾	3 1/16	1 5/16	2⅜	1 11/16	3½	3 1/16
2	4½	1½	3	1¾	4	3½
2¼	5 1/16	1 11/16	3⅜	1 15/16	4½	3 15/16
2½	5⅝	1⅞	3¾	2 5/16	5	4⅜
3	6¾	2¼	4½	2⅝	6	5¼

NOTE: The metric equivalents of the above dimensions may be obtained from B.S. 350, Conversion Factors and Tables. A = nominal size.

EYEBOLTS TO B.S.529

Correct and incorrect methods of slinging



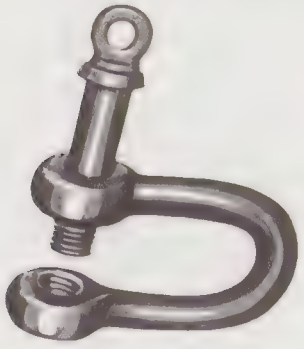
NOTE: Never insert point of hook in an Eyebolt; always use a Shackle.

SAFE WORKING LOADS

Nominal Size of Eyebolt	Maximum Load W to be lifted by each Eyebolt when the sling legs are inclined to the vertical at the stated angle O							
	W		15° W		30° W		45° W	
Inches	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.	Tons	Cwt.
¼	–	5	–	2¾	–	1¾	–	1¼
½	–	10	–	5¾	–	3¾	–	2½
¾	–	18	–	10	–	6½	–	4½
¾	1	8	–	16	–	10½	–	7
⅞	2	0	1	3	–	15	–	10
1	2	15	1	11	1	0	–	13½
1⅛	3	10	2	0	1	5	0	17
1¼	4	10	2	11	1	13	1	2
1½	6	10	3	14	2	8	1	12
1¾	9	0	5	2	3	6	2	4
2	12	0	6	16	4	8	3	0
2¼	15	0	8	10	5	10	3	14
2½	20	0	11	7	7	7	4	19
3	30	0	17	0	11	0	7	8

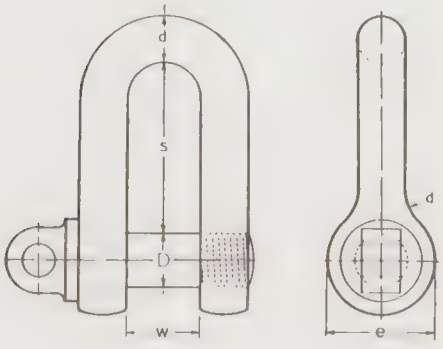
NOTE: In the case of inclined loading the safe loads are applicable only when the tension is applied in the plane of the eye.

SMALL DEE SHACKLES — BLACK OR GALVANISED With Screwed Pin



L282 LOWER TENSILE STEEL (MILD STEEL) (BS825)

L283 HIGHER TENSILE STEEL (BS3032)



ASB 278 — TABLE 1. SMALL DEE SHACKLES

W — Safe Working Load				d*	D	w	s	e
Lower tensile steel		higher tensile steel						
tonf	cwtf	tonf	cwtf	in.	in.	in.	in.	in.
–	–	–	6	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{7}{8}$	$\frac{3}{4}$
–	10	–	12	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$1\frac{3}{8}$	1
–	17	1	0	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{7}{8}$	$1\frac{7}{8}$	$1\frac{1}{4}$
1	8	1	15	$\frac{5}{8}$	$\frac{3}{4}$	1	$2\frac{1}{4}$	$1\frac{1}{2}$
2	0	2	10	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{4}$	$2\frac{3}{4}$	$1\frac{3}{4}$
2	15	3	10	$\frac{7}{8}$	1	$1\frac{3}{8}$	$3\frac{1}{4}$	2
3	10	4	10	1	$1\frac{1}{8}$	$1\frac{1}{2}$	$3\frac{5}{8}$	$2\frac{1}{4}$
4	5	5	10	$1\frac{1}{8}$	$1\frac{1}{4}$	$1\frac{3}{4}$	$4\frac{1}{8}$	$2\frac{1}{2}$
5	5	7	0	$1\frac{1}{4}$	$1\frac{3}{8}$	$1\frac{7}{8}$	$4\frac{1}{2}$	$2\frac{3}{4}$
7	0	–	–	$1\frac{3}{8}$	$1\frac{5}{8}$	$2\frac{1}{8}$	5	$3\frac{1}{4}$
–	–	8	0	$1\frac{3}{8}$	$1\frac{1}{2}$	$2\frac{1}{8}$	5	3
8	10	10	15	$1\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{3}{8}$	$5\frac{1}{2}$	$3\frac{1}{2}$
10	0	13	0	$1\frac{5}{8}$	$1\frac{7}{8}$	$2\frac{1}{2}$	$5\frac{7}{8}$	$3\frac{3}{4}$
11	0	14	15	$1\frac{3}{4}$	2	$2\frac{3}{4}$	$6\frac{3}{8}$	4
12	10	16	15	$1\frac{7}{8}$	$2\frac{1}{8}$	$2\frac{7}{8}$	$6\frac{3}{4}$	$4\frac{1}{4}$
14	0	19	0	2	$2\frac{1}{4}$	3	$7\frac{1}{4}$	$4\frac{1}{2}$
15	10	20	0	$2\frac{1}{8}$	$2\frac{3}{8}$	$3\frac{1}{4}$	$7\frac{3}{4}$	$4\frac{3}{4}$
17	0	24	0	$2\frac{1}{4}$	$2\frac{1}{2}$	$3\frac{1}{2}$	$8\frac{1}{8}$	5
20	0	25	0	$2\frac{3}{8}$	$2\frac{3}{4}$	$3\frac{5}{8}$	$8\frac{5}{8}$	$5\frac{1}{2}$
–	–	30	0	$2\frac{1}{2}$	$2\frac{7}{8}$	$3\frac{7}{8}$	9	$5\frac{3}{4}$
25	0	–	–	$2\frac{5}{8}$	3	4	$9\frac{1}{2}$	6
–	–	35	0	$2\frac{3}{4}$	$3\frac{1}{8}$	$4\frac{1}{4}$	10	$6\frac{1}{4}$
30	0	40	0	$2\frac{7}{8}$	$3\frac{1}{4}$	$4\frac{3}{8}$	$10\frac{3}{8}$	$6\frac{1}{2}$
35	0	44	9	$3\frac{1}{8}$	$3\frac{5}{8}$	$4\frac{7}{8}$	$11\frac{1}{4}$	$7\frac{1}{4}$
–	–	50	0	$3\frac{1}{4}$	$3\frac{3}{4}$	5	$11\frac{3}{4}$	$7\frac{1}{2}$
40	0	–	–	$3\frac{3}{8}$	$3\frac{7}{8}$	$5\frac{1}{4}$	$12\frac{1}{4}$	$7\frac{3}{4}$
50	0	65	0	$3\frac{5}{8}$	$4\frac{1}{4}$	$5\frac{1}{2}$	$13\frac{1}{8}$	$8\frac{1}{2}$
60	0	90	0	4	$4\frac{5}{8}$	$6\frac{1}{8}$	$14\frac{1}{2}$	$9\frac{1}{4}$
80	0	–	–	$4\frac{5}{8}$	$5\frac{1}{4}$	$6\frac{7}{8}$	$16\frac{3}{4}$	$10\frac{1}{2}$

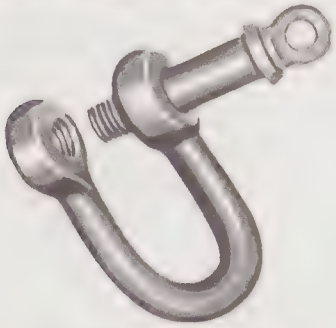
* Nominal Size

N.B. Proof Load = 2 x Safe Working Load (W)

"HIGH LOAD" STEEL SHACKLES

Safety Anchor Shackles to Federal Specification RR-C-271a, Type IV, Class 6.
Safety Chain Shackles to Federal Specification RR-C-271a, Type IV, Class 6.
Screw Pin Anchor Shackles to Federal Specification RR-C-271a, Type IV, Class 1
Screw Pin Chain Shackles to Federal Specification RR-C-271a, Type IV, Class 5.
Now Available. Details and Dimensions can be supplied.

LARGE DEE SHACKLES — BLACK OR GALVANISED With Screwed Pin

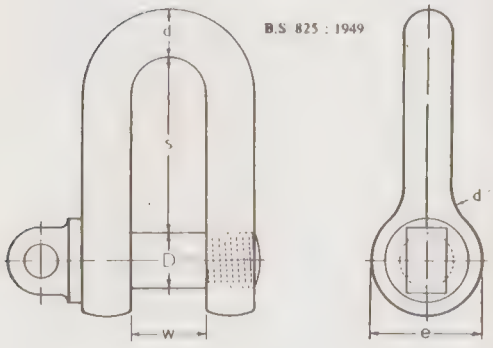


L284 LOWER TENSILE STEEL (MILD STEEL) (BS825)

L285 HIGHER TENSILE STEEL (BS3032)

L286 ALLOY STEEL (BS3551)

Alloy Steel Shackles are supplied in Self Colour Condition or Electro-plated.



NOTE: All Shackles are tested and stamped — Test Certificates can be supplied. Other Standard Pin Types can be supplied.

ASB 278 — TABLE 2. LARGE DEE SHACKLES

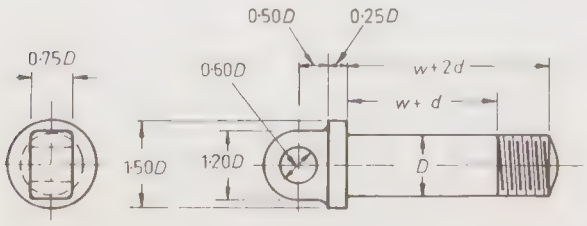
W — Safe Working Load						d*	D	w	s	e
Lower tensile steel		Higher tensile steel		Alloy steel						
tonf	cwtf	tonf	cwtf	tonf	cwtf	in.	in.	in.	in.	in.
–	–	–	5	–	–	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	1	$\frac{3}{4}$
–	8	–	10	–	–	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$1\frac{1}{2}$	1
–	12	–	15	1	2	$\frac{1}{2}$	$\frac{5}{8}$	$1\frac{1}{8}$	$2\frac{1}{8}$	$1\frac{1}{4}$
1	2	1	10	2	5	$\frac{5}{8}$	$\frac{3}{4}$	$1\frac{1}{4}$	$2\frac{1}{2}$	$1\frac{1}{2}$
1	12	2	0	3	0	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{2}$	$2\frac{7}{8}$	$1\frac{3}{4}$
2	5	3	0	4	10	$\frac{7}{8}$	1	$1\frac{3}{4}$	$3\frac{1}{4}$	2
3	0	3	15	5	12	1	$1\frac{1}{8}$	2	$3\frac{3}{4}$	$2\frac{1}{4}$
3	15	5	0	7	10	$1\frac{1}{8}$	$1\frac{1}{4}$	$2\frac{1}{8}$	$4\frac{1}{8}$	$2\frac{1}{2}$
4	10	6	0	9	0	$1\frac{1}{4}$	$1\frac{3}{8}$	$2\frac{3}{8}$	$4\frac{1}{2}$	$2\frac{3}{4}$
5	10	7	0	10	10	$1\frac{3}{8}$	$1\frac{1}{2}$	$2\frac{3}{8}$	5	3
6	10	–	–	–	–	$1\frac{1}{2}$	$1\frac{5}{8}$	$2\frac{3}{4}$	$5\frac{3}{8}$	$3\frac{1}{4}$
–	–	9	10	14	5	$1\frac{1}{2}$	$1\frac{3}{4}$	$2\frac{3}{4}$	$5\frac{3}{8}$	$3\frac{1}{2}$
7	10	–	–	–	–	$1\frac{5}{8}$	$1\frac{3}{4}$	3	$5\frac{3}{4}$	$3\frac{1}{2}$
–	–	11	5	16	5	$1\frac{5}{8}$	$1\frac{7}{8}$	3	$5\frac{3}{4}$	$3\frac{3}{4}$
8	10	–	–	–	–	$1\frac{3}{4}$	$1\frac{7}{8}$	$3\frac{1}{4}$	$6\frac{1}{8}$	$3\frac{3}{4}$
–	–	13	0	19	10	$1\frac{3}{4}$	2	$3\frac{1}{4}$	$6\frac{1}{8}$	4
11	0	14	5	21	5	$1\frac{7}{8}$	$2\frac{1}{8}$	$3\frac{3}{8}$	7	$4\frac{1}{2}$
12	5	16	5	24	5	2	$2\frac{1}{4}$	$3\frac{7}{8}$	$7\frac{3}{8}$	$4\frac{1}{2}$
13	10	18	0	27	0	$2\frac{1}{8}$	$2\frac{3}{8}$	$4\frac{1}{8}$	$7\frac{3}{4}$	$4\frac{3}{4}$
15	0	20	0	30	0	$2\frac{1}{4}$	$2\frac{1}{2}$	$4\frac{1}{4}$	$8\frac{1}{4}$	5
16	10	–	–	–	–	$2\frac{3}{8}$	$2\frac{5}{8}$	$4\frac{1}{2}$	$8\frac{3}{8}$	$5\frac{1}{4}$
–	–	–	–	35	0	$2\frac{3}{8}$	$2\frac{3}{4}$	$4\frac{1}{2}$	$8\frac{3}{4}$	$5\frac{1}{2}$
–	–	25	0	–	–	$2\frac{1}{2}$	$2\frac{7}{8}$	$4\frac{3}{4}$	$9\frac{1}{4}$	$5\frac{3}{4}$
20	0	–	–	–	–	$2\frac{5}{8}$	$2\frac{7}{8}$	5	$9\frac{1}{2}$	$5\frac{3}{4}$
–	–	–	–	40	0	$2\frac{5}{8}$	3	5	$9\frac{3}{4}$	6
–	–	30	0	–	–	$2\frac{3}{4}$	$3\frac{1}{8}$	$5\frac{1}{4}$	$10\frac{1}{4}$	$6\frac{1}{4}$
25	–	–	–	–	–	$2\frac{7}{8}$	$3\frac{1}{4}$	$5\frac{1}{2}$	$10\frac{3}{4}$	$6\frac{1}{2}$
–	–	–	–	50	0	$2\frac{7}{8}$	$3\frac{1}{4}$	$5\frac{1}{2}$	$10\frac{5}{8}$	$6\frac{1}{2}$
–	–	35	0	–	–	3	$3\frac{3}{8}$	$5\frac{3}{4}$	11	$6\frac{3}{4}$
30	0	40	0	–	–	$3\frac{1}{8}$	$3\frac{1}{2}$	$5\frac{7}{8}$	$11\frac{1}{2}$	7
–	–	–	–	65	0	$3\frac{1}{4}$	$3\frac{3}{4}$	$6\frac{1}{4}$	12	$7\frac{1}{2}$
35	0	–	–	–	–	$3\frac{3}{8}$	$3\frac{3}{4}$	$6\frac{1}{4}$	$12\frac{1}{2}$	$7\frac{1}{2}$
–	–	50	0	–	–	$3\frac{1}{2}$	4	$6\frac{3}{4}$	13	8
40	0	–	–	–	–	$3\frac{5}{8}$	$4\frac{1}{8}$	7	$13\frac{1}{2}$	$8\frac{1}{4}$
–	–	–	–	80	0	$3\frac{5}{8}$	$4\frac{1}{4}$	7	$13\frac{3}{8}$	$8\frac{1}{2}$
50	0	65	0	–	–	4	$4\frac{1}{2}$	$7\frac{1}{2}$	$14\frac{3}{4}$	9
60	0	80	0	–	–	$4\frac{1}{2}$	5	$8\frac{5}{8}$	$16\frac{1}{2}$	10
80	0	–	–	–	–	$5\frac{1}{8}$	$5\frac{3}{4}$	$9\frac{7}{8}$	$18\frac{3}{4}$	$11\frac{1}{2}$

* Nominal size.

N.B. Proof Load = 2 x Safe Working Load. (W)

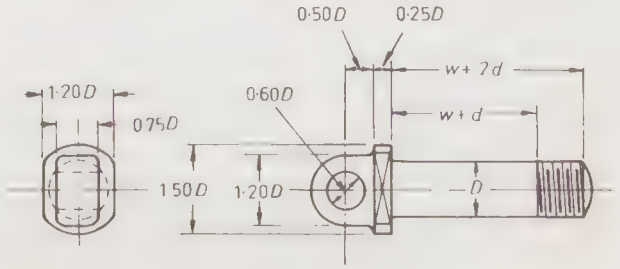
TYPE A PIN

Screwed Pin with Eye and Collar for use with Higher Tensile and Lower Tensile Steel Shackles.



TYPE I PIN

Screwed Pin with Eye and Collar for use with Alloy Shackles. (Pin has flats machined on Collar.)

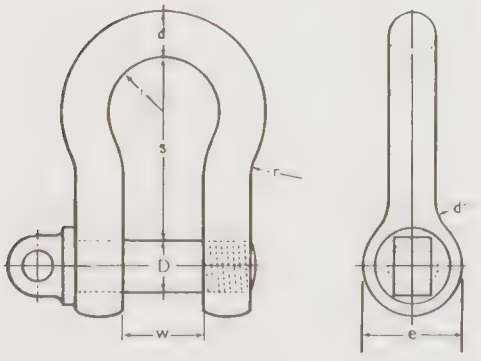


LARGE BOW SHACKLES — BLACK OR GALVANISED Screwed Pin

L287 LOWER TENSILE STEEL (BS825)

L288 HIGHER TENSILE STEEL (BS3032)

L289 ALLOY STEEL (BS3551)



ASB 278 — TABLE 4. LARGE BOW SHACKLES

W — Safe Working Load: Lower tensile steel tonf	cwtf	Higher tensile steel tonf	cwtf	Alloy steel tonf	cwtf	d* in.	D in.	w in.	2r in.	s in.	e in.
–	–	–	3	–	–	¼	⅜	½	¾	1⅛	¾
–	7	–	9	–	–	⅜	½	⅝	1	1⅝	1
–	12	–	15	1	2	½	⅝	⅞	1¼	2⅛	1¼
1	0	1	5	1	17	⅝	¾	1⅛	1⅝	2¾	1½
1	10	2	0	3	0	¾	⅞	1⅜	2	3⅜	1¾
2	0	2	15	4	2	⅞	1	1⅝	2¼	3⅞	2
2	15	3	15	5	10	1	1⅛	1¾	2½	4¼	2¼
3	10	4	15	7	0	1⅛	1¼	2	2⅞	4⅞	2½
4	5	5	15	8	10	1¼	1⅜	2¼	3¼	5⅜	2¾
5	10	7	5	10	15	1⅜	1½	2½	3½	6	3
6	10	8	10	12	15	1½	1¾	2¾	3⅞	6⅝	3½
7	5	9	10	14	5	1⅝	1⅞	3	4⅜	7⅜	3¾
8	15	11	10	17	5	1¾	2	3⅜	4¾	8⅛	4
10	0	13	0	19	10	1⅞	2⅛	3⅝	5⅛	8¾	4¼
–	–	–	–	22	10	2	2¼	3¾	5½	9⅜	4½
11	10	15	0	–	–	2	2¼	3⅞	5½	9⅜	4½
–	–	–	–	25	0	2⅛	2⅜	3⅞	5⅝	9½	4¾
14	0	18	10	–	–	2¼	2½	4⅛	6	10⅛	5
–	–	20	0	30	0	2⅜	2⅝	4⅜	6⅜	10¾	5¼
17	0	–	–	–	–	2½	2¾	4⅝	6¾	11¼	5½
–	–	25	0	35	0	2⅝	2⅞	4¾	7	11⅞	5¾
20	0	–	–	40	0	2¾	3	5	7⅜	12⅜	6
–	–	30	0	–	–	2⅞	3⅛	5¼	7¾	13	6¼
25	0	–	–	50	0	3	3¼	5½	8	13½	6½
–	–	35	0	–	–	3⅛	3⅜	5¾	8⅜	14⅛	6¾
30	0	–	–	–	–	3⅜	3⅝	6⅛	9	15	7¼
–	–	40	0	–	–	3⅜	3⅝	6¼	9	15¼	7¼
–	–	–	–	65	0	3½	3¾	6⅜	9⅜	15¾	7½
35	0	–	–	–	–	3½	3⅞	6½	9⅜	16	7¾
–	–	50	0	–	–	3¾	4	6¾	10	16⅞	8
40	0	–	–	–	–	3⅞	4⅛	7	10⅜	17½	8¼
–	–	–	–	80	0	3⅞	4¼	7	10⅜	17½	8½
50	0	65	0	–	–	4¼	4⅝	7¾	11¼	19	9¼
60	0	80	0	–	–	4⅝	5	8½	12⅛	21	10
80	0	–	–	–	–	5⅜	5¾	9⅜	14⅛	24	11½

* Nominal Size

N.B. Proof Load = 2 x Safe Working Load (W)

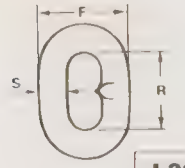
ASB 278 — TABLE 3. SMALL BOW SHACKLES

W — Safe Working Load: Lower tensile steel tonf	cwtf	Higher tensile steel tonf	cwtf	d* in.	D in.	w in.	2r in.	s in.	e in.
–	–	–	4	¼	⅜	½	⅝	1	¾
–	8	–	10	⅜	½	⅝	⅞	1½	1
–	15	1	0	½	⅝	⅞	1⅛	2	1¼
1	2	1	10	⅝	¾	1⅛	1½	2½	1½
1	12	2	0	¾	⅞	1⅜	1¾	3	1¾
2	5	3	0	⅞	1	1½	2	3½	2
3	0	4	0	1	1¼	1¾	2⅜	4	2¼
3	15	5	0	1⅛	1¼	2	2⅝	4½	2½
4	10	6	5	1¼	1⅜	2⅛	3	5	2¾
5	15	7	10	1⅜	1½	2⅜	3¼	5½	3
7	0	9	5	1½	1¾	2⅝	3½	6	3½
8	0	10	10	1⅝	1⅞	2⅞	3⅝	6½	3¾
9	10	12	10	1¾	2	3⅛	4⅛	7	4
10	15	14	5	1⅞	2⅛	3⅜	4½	7½	4¼
12	10	16	10	2	2¼	3⅝	4¾	8	4½
14	0	18	10	2⅛	2⅜	3¾	5	8½	4¾

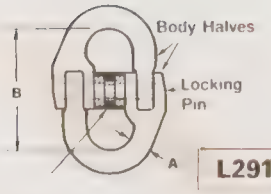
W — Safe Working Load: Lower tensile steel tonf	cwtf	Higher tensile steel tonf	cwtf	d in.	D in.	w in.	2r in.	s in.	c in.
15	10	20	0	2¼	2½	4⅛	5⅜	9	5
17	0	–	–	2⅜	2⅝	4¼	5⅝	9½	5½
–	–	25	0	2½	2¾	4½	6	10	5½
20	0	–	–	2⅝	2⅞	4¾	6¼	10½	5¾
–	–	30	0	2¾	3⅛	5	6⅝	11	6¼
25	0	–	–	2⅞	3¼	5⅛	6⅞	11½	6½
–	–	35	0	3	3⅜	5⅜	7¼	12	6¾
30	0	40	0	3⅛	3½	5⅝	7½	12½	7
35	0	–	–	3⅜	3¾	6	8	13½	7½
–	–	50	0	3½	3⅞	6¼	8⅜	14	7¾
40	0	–	–	3⅝	4	6½	8⅜	14½	8
–	–	65	0	4	4½	7¼	9⅝	16	9
50	0	–	–	4⅛	4½	7¼	9¾	16½	9
60	0	80	0	4½	5	8⅛	10¾	18	10
80	0	–	–	5⅛	5¾	9¼	12¼	20½	11½

HERC-ALLOY CHAIN, HAMMERLOK & OBLONG LINKS

PRINCIPAL DIMENSIONS



L290



L291

(Spacers and Snap Ring encased in plastic sleeve, shown in section)

*Dimension E Diameter of stock of largest link intended to be used with Hammerlok.

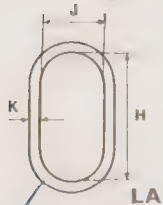
REGULAR SINGLE

REGULAR MULTI

L292

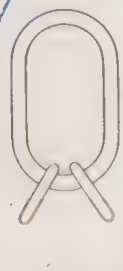
PRE-SLUNG

L293



LARGE SINGLE

L294



LARGE MULTI

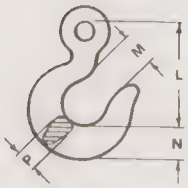
L295

**Weight of link includes Tag and Attachment Ring.

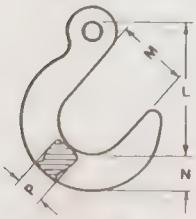
	CHAIN SIZE (inches)	9/32	3/8	1/2	5/8	3/4	7/8	1	1 1/4
HERC-ALLOY CHAIN									
	Dimension F (ins.)	0.96	1.25	1.69	2.06	2.47	2.84	3.35	4.16
	Dimension R (ins.)	0.86	1.09	1.40	1.73	2.00	2.25	2.66	3.25
	Dimension S (ins.)	0.28	0.38	0.50	0.63	0.75	0.88	1.00	1.25
	Links per foot	14.00	11.00	8.50	7.00	6.00	5.30	4.50	3.60
	Safe Work Load (tons)	1.40	2.50	4.50	7.00	10.10	13.70	16.00	25.00
	Wt. of 100 ft. (lbs)	74	128	236	380	556	730	975	1522
HAMMERLOK									
	Dimension A (ins.)	0.31	0.44	0.62	0.75	0.88	1.00	1.22	1.47
	Dimension B (ins.)	1.81	2.41	3.38	4.06	4.78	5.44	5.75	4.19
	Dimension E (ins.)*	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25
	Safe Work Load (tons)	1.40	2.50	4.50	7.00	10.10	13.70	16.00	25.00
	Wt. each (lbs.)	0.24	0.50	1.38	2.30	3.65	5.92	9.17	15.87
OBLONG LINKS									
REGULAR SINGLE	Dimension H (ins.)	3.50	3.50	4.50	5.50	7.00	8.00		
	Dimension J (ins.)	1.75	1.75	2.25	2.75	3.50	4.00		
	Dimension K (ins.)	.50	.50	.75	1.00	1.25	1.50		
	Safe Work Load (tons)	1.40	2.50	4.50	7.00	10.10	13.70		
	Wt. each (lbs.)**	1.01	1.01	2.17	4.22	7.92	13.10		
REGULAR MULTI	Dimension H (ins.)	3.50	4.50	5.50	7.00	8.00	9.50		
	Dimension J (ins.)	1.75	2.25	2.75	3.50	4.00	4.75		
	Dimension K (ins.)	.50	.75	1.00	1.25	1.50	1.75		
	Safe Work Load (tons)	2.40	4.30	7.60	11.90	17.20	23.40	NOT YET	
	Wt. each (lbs.)**	1.01	2.17	4.22	7.92	13.10	20.80		
PRE-SLUNG CARGO	Dimension H (ins.)	3.50	4.50	5.50	7.00	8.00	9.50	AVAILABLE	
	Dimension J (ins.)	1.75	2.25	2.75	3.50	4.00	4.75		
	Dimension K (ins.)	.50	.75	1.00	1.25	1.50	1.75		
	Dimension T (ins.)	1.25	1.75	2.25	2.75	3.25	3.75		
	Dimension U (ins.)	.56	.81	1.06	1.31	1.56	1.81		
	Dimension V (ins.)	.41	.50	.62	.75	1.00	1.25		
	Safe Work Load (tons)	1.40	2.50	4.50	7.00	10.10	13.70		
	Wt. each (lbs.)**	1.17	2.51	4.89	9.10	15.60	25.60		
LARGE SINGLE	Dimension H (ins.)	5.50	7.00	9.50	11.00	12.00	13.00	14.00	16.00
	Dimension J (ins.)	2.75	3.50	4.75	5.50	6.00	6.50	7.00	8.00
	Dimension K (ins.)	.50	.75	1.00	1.25	1.50	1.75	2.00	2.25
	Safe Work Load (tons)	1.40	2.50	4.50	7.00	10.10	13.70	16.00	25.00
	Wt. each (lbs.)**	1.37	3.04	6.63	11.70	17.50	25.40	37.80	54.50
LARGE MULTI	Dimension H (ins.)	7.00	9.50	11.00	12.00	13.00	14.00	16.00	16.00
	Dimension J (ins.)	3.50	4.75	5.50	6.00	6.50	7.00	8.00	9.00
	Dimension K (ins.)	.75	1.00	1.25	1.50	1.75	2.00	2.25	2.75
	Dimension T (ins.)	1.88	2.25	3.12	4.00	4.38	5.25	6.00	7.00
	Dimension U (ins.)	1.00	1.25	1.75	2.25	2.38	2.75	3.00	3.50
	Dimension V (ins.)	.50	.62	.88	1.12	1.25	1.50	1.75	2.00
	Safe Work Load (tons)	2.40	4.30	7.60	11.90	17.20	23.40	27.20	42.50
	Wt. each (lbs.)**	3.78	8.03	15.30	25.20	35.90	55.70	82.50	128.00

HERC-ALLOY SLING, FOUNDRY & GRAB HOOKS

PRINCIPAL DIMENSIONS



L296



L297

L298

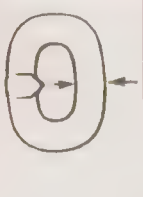
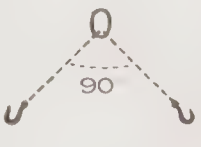
	(CHAIN SIZE inches)	9/32	3/8	1/2	5/8	3/4	7/8	1	1 1/4
SLING	Dimension L (ins.)	3.06	4.06	5.44	6.81	8.12	9.50	9.50	11.50
	Dimension M (ins.)	1.00	1.25	1.69	2.12	2.56	3.00	3.12	3.88
	Dimension N (ins.)	1.00	1.31	1.75	2.19	2.62	3.06	3.09	3.64
	Dimension P (ins.)	0.69	0.88	1.12	1.44	1.75	2.00	2.14	2.44
	Safe Work Load (tons)	1.40	2.50	4.50	7.00	10.10	13.70	16.00	25.00
	Wt. each (lbs.)	0.90	1.80	4.80	9.10	11.20	16.90	22.60	36.00
FOUNDRY	Dimension L (ins.)	4.75	5.75	6.88	8.06	9.25	10.40	11.60	12.90
	Dimension M (ins.)	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00
	Dimension N (ins.)	1.23	1.50	1.75	2.03	2.56	2.70	3.03	3.62
	Dimension P (ins.)	1.00	1.27	1.50	1.81	2.20	2.25	2.59	3.17
	Safe Work Load (tons)	1.40	2.50	4.50	7.00	10.10	13.70	16.00	25.00
	Wt. each (lbs.)	2.00	4.50	7.00	11.00	15.00	22.00	31.00	46.00
GRAB	Dimension L (ins.)	2.38	3.12	3.94	4.78	5.50	6.50	7.75	10.50
	Dimension M (ins.)	0.36	0.50	0.62	0.75	.88	1.00	1.19	1.50
	Safe Work Load (tons)								
	Circular Load	0.90	1.60	2.90	4.60	6.60	9.00	11.00	16.60
	Rectangular Load	0.70	1.20	2.20	3.50	5.00	6.80	8.00	12.50
	Wt. each (lbs.)	0.40	1.00	1.90	3.80	6.10	9.40	20.50	40.00

PWB INSTANT ALLOY SLINGS

Table of safe working loads, for normal conditions of use, acceptable to the relevant Statutory Authorities in all States and A.C.T.

MAXIMUM SAFE WORKING LOADS, IN TONS

(of 2240 lbs., and decimal parts of 1 ton i.e. 1.4 in table = 1 ton 8 cwt. = 3136 lbs.)

Size of Chain (inches)	Single Hook or Reevable Collar Slings			2, 3 or 4 Leg Slings — not back hooked		
	Not Back Hooked	Reeved on Circular Load	Reeved on Rectangular Load	at 60°	at 90°	at 120°
						
9/32	1.4	0.9	0.7	2.4	1.9	1.4
3/8	2.5	1.6	1.2	4.3	3.5	2.5
1/2	4.5	2.9	2.2	7.6	6.3	4.5
5/8	7.0	4.6	3.5	11.9	9.8	7.0
3/4	10.1	6.6	5.0	17.2	14.1	10.1
7/8	13.7	9.0	6.8	23.4	19.2	13.7
1	16.0	10·5	8.0	27.2	22.4	16.0
1 1/4	25.0	16.5	12.5	42.5	35.0	25.0

S.W.L. AT 60° — must never be exceeded, even at smaller angles. S.W.L. AT OTHER ANGLES — may be interpolated between the loads at 60° and 120°. FLEXIBLE LOADS — above ratings must not be exceeded even if the load is flexible.

TESTED PROOF COIL CHAIN

L290

A general purpose chain available in a range of material diameters, link shapes and finishes. Proof tested and examined but not intended for lifting applications, for which BBB-30, HT-40 and Herc Alloy are recommended.

* Reference numbers not allocated for these chain sizes.

Type	Ref. No.	Trade Size (inches)	Link Dimensions (inches)		Links per Foot	Safe Work Load (tons)	Length per 100lbs.	
			Outside Length	Outside Width			Self Colored (ft.)	Hot Dip Galv. (ft.)
SHORT LINK	186	1/8	1	5/8	17.6	0.10	411	390
	183	3/16	1 3/16	3/4	14.9	0.14	299	284
	123	1/4	1 9/16	1 1/32	11.9	0.33	141	134
	72	5/16	1 15/16	1 1/4	9.7	0.56	92	87
	31	3/8	2 1/32	1 13/32	9.8	0.89	62	59
	5	7/16	2 5/16	1 9/16	8.7	1.20	48	46
	1	1/2	2 1/2	1 3/4	8.3	1.58	37	35
LONG LINK	187	1/8	1 1/8	5/8	14.9	0.09	437	415
	125	1/4	1 15/16	1	8.7	0.33	171	163
	77	5/16	2 3/8	1 1/2	7.1	0.41	100	95
	35	3/8	2 3/4	1 3/4	6.2	0.57	76	72
	6	7/16	2 15/16	1 7/8	6.0	0.86	52	49
	2	1/2	3	1 3/4	6.2	1.50	45	42
	*	5/8	3 3/4	2 1/4	4.8	2.05	31	30
	*	3/4	4 1/2	2 11/16	4.4	2.91	22	21
	*	7/8	5 1/4	3 3/16	3.8	3.92	16	16
SIDE	202	3/16	1 3/16	13/16	8.7	0.18	293	278
	203	1/4	1 27/32	15/16	8.9	0.25	212	201
	204	5/16	2 1/16	1 1/8	6.6	0.41	143	136
	205	3/8	2 11/16	1 9/32	6.2	0.64	93	88

FINISHES — self colored and hot dip galvanised

HT-40 CHAIN

L291

Made from higher tensile steel giving a strength 1/3 greater than BBB-30 chain of the same material size. Material, link proportions, heat treatment, marking and testing are in accordance with British Standard 1663:1950 (Grade 40) "short link, higher tensile steel chain for lifting purposes". Stamped 4 every 20th link or 3 ft., whichever is the lesser distance. *Test Certificate can be supplied if requested at time of ordering.*

Nominal Size (inches)	Link Dimensions (ins.)			Links Per Foot	Safe Work Load (tons)	Length Per 100 lbs.	
	Material Diameter	Outside Length	Outside Width			Self Colored (ft.)	Hot Dip Galv. (ft.)
5/16	.312	1 17/32	1 1/16	13.3	0.78	105	100
3/8	.375	1 27/32	1 9/32	11.0	1.12	73	70
7/16	.438	2 5/32	1 1/2	9.4	1.53	54	51
1/2	.531	2 19/32	1 13/16	7.8	2.25	36	35
5/8	.656	3	2 3/16	7.1	3.44	24	22
3/4	.781	3 7/16	2 9/16	6.4	4.50	16	15
7/8	.906	4 1/16	3 1/16	5.3	6.12	12	11

FINISHES — self colored and hot dip galvanised

BBB-30 CHAIN

L292

The highest quality mild steel chain. Material, link proportions, heat treatment, marking and testing are in accordance with British Standard 590:1949 (Grade 30), "short link, mild steel chain for lifting purposes". Stamped 3 every 20th link or 3 ft., whichever is the lesser distance. Test Certificate can be supplied if requested at time of ordering.

Trade Size (inches)	Link Dimensions (ins.)			Links Per Foot	Safe Work Load (tons)	Length Per 100 lbs.	
	Material Diameter	Outside Length	Outside Width			Self Colored (ft.)	Hot Dip Galv. (ft.)
5/16	.344	1 11/16	1 5/32	12.0	0.71	87	82
3/8	.406	2	1 3/8	10.2	0.99	62	59
7/16	.469	2 5/16	1 19/32	8.7	1.32	46	44
1/2	.531	2 19/32	1 13/16	7.8	1.69	36	35
9/16	.594	2 29/32	2 1/32	7.0	2.11	29	27
5/8	.656	3	2 3/16	7.1	2.58	23	22
3/4	.781	3 7/16	2 9/16	6.4	3.37	16	15
7/8	.906	4 1/16	3 1/16	5.3	4.59	12	11
1	1.000	4 9/16	3 3/8	4.7	6.00	9	8

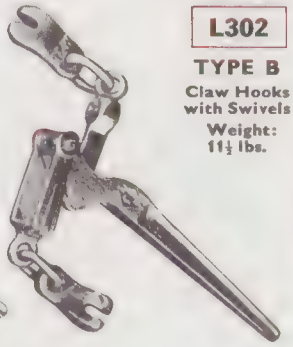
FINISHES — self colored and hot dip galvanised.

LOAD BINDERS

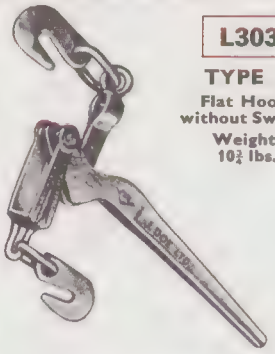
OREGON TYPE LOAD BINDERS

Drop forged, heat treated, higher tensile steel. Lighter and shorter than the Heavy Type. Suitable for the majority of applications, 4¼″ take-up. Claw hooks increase chain life. Overall length of body 21″. Blue enamel finish.

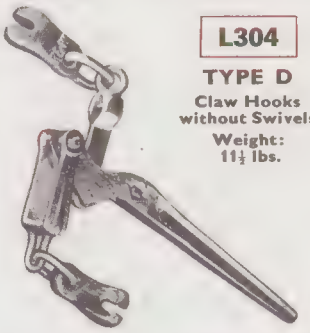
L301
TYPE A
Flat Hooks with Swivels
Weight: 10¾ lbs.



L302
TYPE B
Claw Hooks with Swivels
Weight: 11½ lbs.



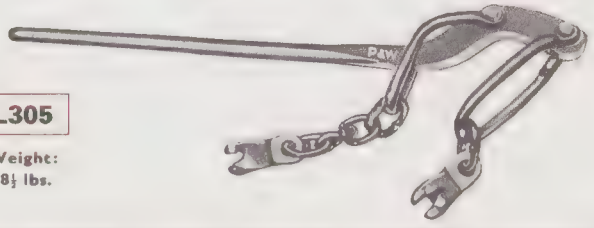
L303
TYPE C
Flat Hooks without Swivels
Weight: 10¾ lbs.



L304
TYPE D
Claw Hooks without Swivels
Weight: 11½ lbs.

HEAVY TYPE LOAD BINDER

A larger and heavier load binder than the Oregon, with 7″ take-up. Supplied with one swivel and one fixed claw hook. Other hook arrangements on application. Overall length of body 31½″. Blue enamel finish.



L305
Weight: 18½ lbs.

LOAD BINDER CHAIN

PLAIN HOOK TYPE

L306 CLAW HOOK TYPE **L307**

CHAIN — ⅜″ Proof Tested Coil Chain			
Reach (ft.)	20	25	30
Weight (lbs)	34	42	50

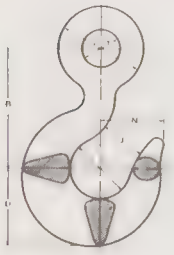
CHAIN SLINGS

SAFE LOADS OF CHAIN SLINGS (MILD STEEL CHAIN TO B.S. 590)

Size of Chain	Single Sling		Nip or Reevable Sling		2, 3 or 4 Leg Sling				4 Leg Sling Flexible Loads Only	
			NIP		30° 30°		60° 60°		90° 90°	
Inches	Tons	Cwts	Tons	cwts	Tons	Cwts	Tons	Cwts	Tons	Cwts
5/16	0	12	0	6	1	3	1	1	1	14
3/8	0	17	0	9	1	13	1	9	2	8
7/16	1	3	0	12	2	4	2	0	3	6
1/2	1	10	0	15	2	18	2	12	4	4
9/16	1	18	0	19	3	13	3	6	5	8
5/8	2	7	1	4	4	11	4	1	6	12
3/4	3	8	1	14	6	11	5	18	9	12
7/8	4	12	2	6	8	18	7	19	13	0
1	6	0	3	0	11	12	10	8	17	0

NOTE: Safe Loads used for Heavy Duty or Rough Usage shall be reduced to 4/5ths of the above values.

EYE HOOKS TRAPEZOIDAL SECTION B.S. 482



L308

L309 Spring type Safety Hook.

L310 Counterweight type Safety Hook

DIMENSIONS IN INCHES

W = Safe Working Load — Tons	C = 1.48√W	A = 2.79C	B = 1.98 C	D = 1.29 C	G = 1.41 C	J = 0.75 C	N = 1.05 C	S = 0.40 C	T = 0.61 C
¼	1 5/16	2 11/16	1 7/8	1 3/16	1 3/8	1 1/16	1 5/16	3/8	5/8
½	1 5/16	3 11/16	2 5/8	1 11/16	1 15/16	1	1 3/8	9/16	13/16
¾	1 5/8	4 9/16	3 1/4	2 1/16	2 3/8	1 1/4	1 11/16	11/16	1
1	1 13/16	5 1/8	3 5/8	2 3/8	2 5/8	1 3/8	1 15/16	3/4	1 1/8
1½	2 1/4	6 1/4	4 7/16	2 7/8	3 1/8	1 11/16	2 3/8	7/8	1 3/8
2	2 3/8	7 5/16	5 3/16	3 3/8	3 3/4	1 15/16	2 3/4	1 1/16	1 5/8
2½	2 13/16	8 3/16	5 13/16	3 13/16	4 3/16	2 1/4	3 1/16	1 3/16	1 13/16
3	3 1/16	8 7/8	6 5/16	4 1/8	4 1/2	2 3/8	3 1/8	1 1/4	2
4	3 11/16	10 5/16	7 5/16	4 3/4	5 1/4	2 3/4	3 7/8	1 1/2	2 1/4
5	4 1/8	11 1/2	8 3/16	5 5/16	5 3/4	3 1/8	4 5/16	1 5/8	2 1/2
6	4 1/2	12 9/16	8 15/16	5 3/4	6 3/8	3 3/8	4 3/4	1 13/16	2 3/4
7½	5	14	9 15/16	6 1/2	7	3 3/4	5 5/16	2	3

SHANK HOOK TRAPEZOIDAL SECTION B.S. 482

W = Safe Working Load — Tons	C = 1.84√W	A = 2.46 C	B = 1.17 C	D = 1.29 C	G Machined Shank Dia. (min.)	G1 Dia. at Top of Thread (min.)	J = 0.75 C	N = 1.03 C	T = 0.62 C	V = 0.18
¼	1 5/16	2 1/4	1 1/16	1 3/16	1/2	1/2	1 1/16	1 5/16	5/8	3/16
⅜	1 13/16	2 3/4	1 5/16	1 7/16	9/16	9/16	7/8	1 3/16	3/4	3/16
½	1 5/16	3 3/16	1 1/2	1 11/16	11/16	11/16	1	1 5/16	7/8	1/4
⅝	1 7/16	3 9/16	1 11/16	1 7/8	11/16	11/16	1 1/16	1 1/2	7/8	1/4
¾	1 9/16	3 13/16	1 7/8	2 1/16	3/4	3/4	1 3/16	1 5/8	1	5/16
⅞	1 3/4	4 1/4	2	2 1/4	13/16	13/16	1 5/16	1 3/4	1 1/16	5/16
1	1 13/16	4 1/2	2 1/8	2 3/8	7/8	7/8	1 3/8	1 7/8	1 3/16	5/16
1¼	2 1/16	5 1/16	2 7/16	2 5/8	1 3/16	1 3/16	1 9/16	2 1/8	1 1/4	3/8
1½	2 1/4	5 9/16	2 5/8	2 15/16	1	1	1 11/16	2 5/16	1 3/8	3/8
1¾	2 7/16	6	2 7/8	3 1/8	1 1/8	1 1/8	1 13/16	2 1/2	1 1/2	7/16
2	2 5/8	6 3/8	3	3 3/8	1 1/8	1 1/8	1 15/16	2 11/16	1 5/8	7/16
2¼	2 3/4	6 13/16	3 1/4	3 9/16	1 1/4	1 1/4	2 1/16	2 13/16	1 11/16	1/2
2½	2 13/16	7 1/8	3 3/8	3 3/4	1 3/8	1 3/8	2 3/16	3	1 13/16	1/2
2¾	3 1/16	7 1/2	3 9/16	3 15/16	1 7/16	1 3/8	2 5/16	3 3/16	1 7/8	9/16
3	3 3/16	7 11/16	3 11/16	4 1/8	1 7/16	1 3/8	2 3/8	3 5/16	2	9/16
4	3 11/16	9 1/16	4 5/16	4 3/4	1 11/16	1 5/8	2 3/4	3 13/16	2 5/16	11/16
5	4 1/8	10 1/8	4 13/16	5 5/16	1 7/8	1 3/4	3 1/16	4 1/4	2 9/16	3/4

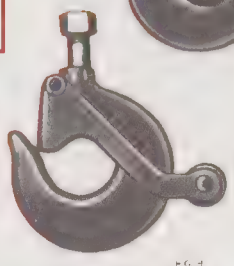
NOTE 1: The proportion of each forged dimension in terms of C is indicated below each reference letter.
NOTE 2: Proof Load = 2 x safe working load W. Available with Capacity up to 20 tons.

L311

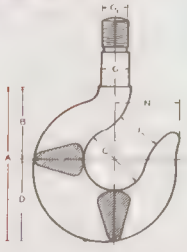
L312

L313

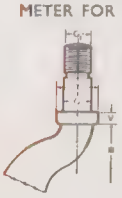
L314



L315



SHANK HOOK, TRAPEZOIDAL SECTION, HAVING INCREASED INTERNAL DIAMETER FOR SMALL LOADS.

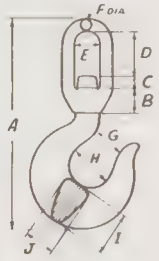


ALTERNATIVE SHANK B.S. 482

ALTERNATIVE SHANK WITH INTEGRAL COLLAR FOR TRAPEZOIDAL SECTION SHANK HOOK.

SWIVEL HOOKS

DIMENSIONS IN INCHES



L316

SWL Tns Cwt	A	B	C	D	E	F	G	H	I	J
5	6½	¾	½	1¼	9/16	⅜	1	1¼	1 1/16	⅝
10	8	⅞	⅝	1⅜	¾	7/16	1⅛	1⅜	1⅜	⅞
15	8¾	1	⅝	1½	⅞	½	1¼	1½	1⅜	1
1 0	9	1⅛	⅞	2⅛	1⅛	⅝	1⅛	1½	1⅜	⅞
1 10	10¾	1⅜	1	2½	1⅛	¾	1⅜	1 13/16	1 11/16	1⅛
2 0	11½	1⅜	1	2½	1⅛	¾	1 9/16	2⅛	2	1¼
– –	12	1⅜	1	2½	1⅛	¾	1 11/16	2¼	2⅛	1⅜
3 0	13½	1½	1⅛	2½	1½	⅞	1 15/16	2⅝	2 7/16	1 9/16
4 0	16½	1¾	1⅛	3¼	1⅝	1	2¼	3	2 13/16	1 13/16
5 0	18	1⅞	1⅜	4⅜	1⅞	1⅛	2½	3⅜	3⅛	2
– –	19	1⅞	1⅜	4⅜	1⅞	1⅛	2 11/16	3 9/16	3 5/16	2⅛
7 10	22½	2¾	2	5	3	1½	3⅛	4	3 13/16	2½
10 0	27	3⅛	2½	5¾	4	1⅞	3 9/16	4¾	4 7/16	2⅞
15 0	33	4½	3½	6½	5	2⅛	4⅜	5 13/16	5⅜	3½
20 0	40	5½	4	7½	6	2½	5	6 1/16	6¼	4

CARGO HOOKS B.S.S. 591

(LIVERPOOL "C")

DIMENSIONS IN INCHES

ALSO AVAILABLE WITH SWIVEL

L317

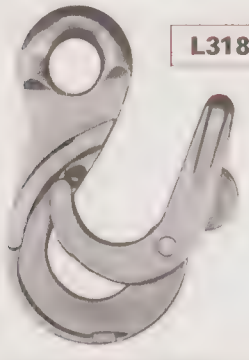
SWL Tns Cwt	A	C	G	H	K	M	S	T	U
1 0	7¼	1 13/16	3 11/16	1 9/16	3 13/16	1	¾	1 1/16	1 3/16
1 10	8⅞	2¼	4½	1⅞	4 11/16	1¼	⅞	1 3/16	1
2 0	10¼	2⅝	5¼	2 3/16	5⅜	1 7/16	1 1/16	1 5/16	1⅛
3 0	12 9/16	3 3/16	6⅜	2 11/16	6 11/16	1¾	1¼	1⅛	1⅜
4 0	14½	3 11/16	7⅜	3 1/16	7⅝	2	1½	1 5/16	1⅝
5 0	16¼	4⅛	8¼	3 7/16	8½	2¼	1⅝	1½	1 13/16
6 0	17¾	4½	9	3¾	9 5/16	2½	1 13/16	1⅝	2
7 0	19 3/16	4⅞	9¾	4⅛	10 1/16	2 11/16	1 15/16	1¾	2⅛
8 0	20½	5¼	10 7/16	4⅜	10¾	2⅞	2 1/16	1⅞	2 5/16
9 0	21¾	5½	11	4⅝	11 7/16	3 1/16	2 3/16	2	2 7/16
10 0	22⅞	5 13/16	11⅝	4⅞	12	3 3/16	2 5/16	2⅛	2 9/16

SF HOOKS WITH EYE OR SHANK

Material — Chromium, Nickel Alloy, Steel

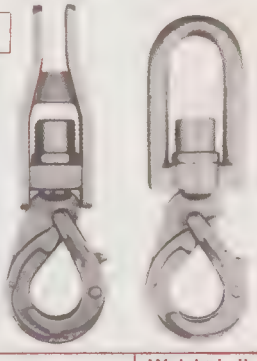
Every hook is tested and marked with safe working load in tons.

L318



L319

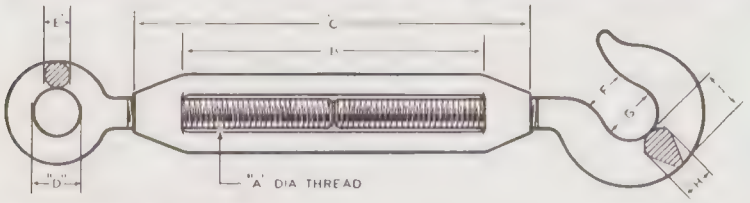
L320



Lt Length overall.
Le Effective working length.
M Thickness of material in eye.
d Diameter of hole in eye.
Dz Diameter of unmachined shank.
Z Length of unmachined shank
B Width overall.
G Maximum opening.
D Width inside hook.
H Length inside hook.
S Thickness at bottom hook.

S.W.L. Tons Cwt.	Dimensions in Inches													Maximum thickness of outside profile	Weight in lbs. Eye	Weight in lbs. Shank
	Lt.	Le	M	d	Ltl	Lel	Dz	Z	B	G	D	H	S			
1 0	5 1/16	3¾	9/16	⅞	6 11/16	3⅛	1 5/16	2 11/16	3⅛	1¼	1 9/16	1 15/16	¾	1 1/16	1¼	1½
1 10	6 7/16	5	⅝	1	—	—	—	—	3⅜	1⅝	1¾	2½	¾	1¼	1½	—
2 0	7½	5¾	¾	1⅛	8 11/16	5 1/16	1⅛	2 11/16	4¼	1 11/16	2 3/16	2 15/16	1	1 7/16	2½	3½
3 0	9⅜	7¼	⅞	1½	11⅝	6¼	1½	4⅛	5¼	2 3/16	2¾	3 15/16	1¼	1⅞	5½	7
5 0	11¼	8⅝	1 3/32	1¾	14⅛	7 5/16	1¾	5 5/16	6 5/16	2 11/16	3 5/16	4¾	1½	2⅜	10	12
15 0	16¾	12⅝	1 9/16	2⅜	27 13/16	11⅝	2¾	13⅝	9 11/16	3 15/16	4¾	6 11/16	2 9/16	3 9/16	22	50½
15 0	—	—	—	—	37 13/16	11⅝	2¾	23⅝	9 11/16	3 15/16	4¾	6 11/16	2 9/16	3 9/16	—	66

STRAINING SCREWS or TURNBUCKLES



L320 HOOK AND EYE
Hot Dip Galvanised

ALSO IN EYE AND EYE **L321**
Hot Dip Galvanised

AND ELONGATED EYE **L322**
Hot Dip Galvanised

AND STUB ENDS **L323**
Self Colour

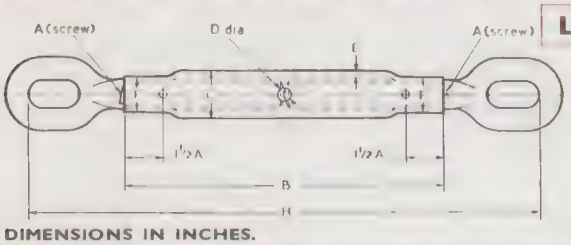
DIMENSIONS IN INCHES

A Diameter	B	C	D	E	F	G	H	I
$\frac{1}{4}$	3	$3\frac{3}{4}$	$\frac{7}{16}$	$\frac{1}{4}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{16}$	$\frac{3}{8}$
$\frac{5}{16}$	4	5	$\frac{1}{2}$	$\frac{5}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{8}$	$\frac{3}{4}$
$\frac{3}{8}$	$4\frac{3}{4}$	$5\frac{7}{8}$	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{8}$	$\frac{3}{4}$
$\frac{1}{2}$	6	$7\frac{7}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{3}{4}$
$\frac{5}{8}$	6	8	$\frac{15}{16}$	$\frac{9}{16}$	$\frac{7}{8}$	$1\frac{1}{8}$	$\frac{5}{8}$	1
$\frac{3}{4}$	6	$8\frac{1}{2}$	$1\frac{1}{8}$	$\frac{3}{4}$	1	$1\frac{3}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$
$\frac{7}{8}$	6	$8\frac{3}{4}$	$1\frac{1}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{8}$	$1\frac{5}{8}$
1	6	$8\frac{3}{4}$	$1\frac{5}{8}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{8}$	$1\frac{5}{8}$
$1\frac{1}{8}$	6	$9\frac{1}{4}$	2	$\frac{7}{8}$	$1\frac{3}{8}$	$1\frac{13}{16}$	$1\frac{1}{8}$	$1\frac{11}{16}$
$1\frac{1}{4}$	6	$9\frac{7}{8}$	2	$\frac{7}{8}$	$1\frac{9}{16}$	$2\frac{1}{8}$	$1\frac{1}{4}$	2
$1\frac{3}{8}$	6	$10\frac{1}{8}$	$2\frac{1}{4}$	$1\frac{1}{16}$	$1\frac{9}{16}$	$2\frac{1}{8}$	$1\frac{1}{4}$	2
$1\frac{1}{2}$	6	$10\frac{7}{8}$	$2\frac{1}{4}$	$1\frac{1}{16}$	$1\frac{15}{16}$	$2\frac{5}{8}$	$1\frac{9}{16}$	$2\frac{7}{16}$
$1\frac{3}{4}$	6	$10\frac{7}{8}$	3	$1\frac{3}{8}$	$2\frac{1}{4}$	3	$1\frac{13}{16}$	$2\frac{13}{16}$
2	6	12	3	$1\frac{5}{8}$	$2\frac{1}{2}$	$3\frac{3}{8}$	2	$3\frac{1}{8}$
$2\frac{1}{4}$	6	$12\frac{1}{2}$	$3\frac{1}{2}$	$1\frac{7}{8}$	$2\frac{11}{16}$	$3\frac{9}{16}$	$2\frac{1}{8}$	$3\frac{5}{16}$
$2\frac{1}{2}$	6	$13\frac{1}{2}$	4	$1\frac{7}{8}$	$3\frac{1}{8}$	4	$2\frac{1}{8}$	$3\frac{13}{16}$

Screws can be supplied with larger or smaller extensions than those shown. Fittings can be made to suit all applications. Standard sizes only shown.

RIGGING SCREWS, B.S. 716

L324



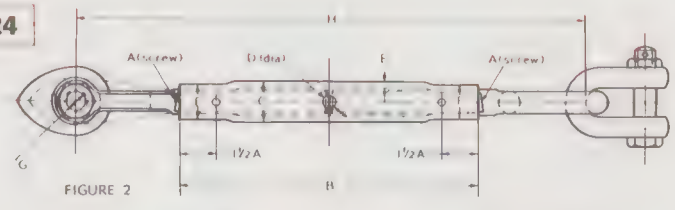


FIGURE 2

DIMENSIONS IN INCHES.

NOTE: Permissible alternative form shown by dotted lines.

Nominal Size A	Diameter of Wire Rope	For Ropes Sized by Circum-ference	B	C	D	swg.	E	F (min.)	G Diameter of Bolt and Nut	H Fig. 1 *Closed	H Fig. 1 Open	H Fig. 2 *Closed	H Fig. 2 Open	Proof Load T.	Proof Load C.	†Maximum Load Recommended Safe Working T.	†Maximum Load Recommended Safe Working C.
$\frac{1}{2}$	$\frac{5}{16}$	1	9	$1\frac{1}{16}$	$\frac{3}{8}$	8	0.160	$\frac{3}{4}$	$\frac{1}{2}$	$13\frac{1}{8}$	$21\frac{1}{8}$	$13\frac{1}{16}$	$21\frac{1}{16}$		18		9
$\frac{5}{8}$	$\frac{3}{8}$	$1\frac{1}{4}$	9	$1\frac{1}{16}$	$\frac{3}{8}$	8	0.160	$\frac{7}{8}$	$\frac{9}{16}$	$14\frac{1}{2}$	$22\frac{1}{4}$	$14\frac{1}{2}$	$22\frac{1}{4}$	1	10		15
$\frac{3}{4}$	$\frac{7}{16}$	$1\frac{1}{2}$	9	$1\frac{11}{32}$	$\frac{7}{16}$	8	0.160	1	$\frac{5}{8}$	$15\frac{1}{2}$	23	$15\frac{3}{8}$	$22\frac{7}{8}$	2	5	1	2
$\frac{7}{8}$	$\frac{9}{16}$	$1\frac{3}{4}$	12	$1\frac{11}{32}$	$\frac{1}{2}$	6	0.192	$1\frac{1}{4}$	$\frac{3}{4}$	$18\frac{1}{2}$	$28\frac{3}{4}$	$18\frac{5}{8}$	$28\frac{7}{8}$	3	5	1	12
1	$\frac{5}{8}$	2	14	$1\frac{11}{16}$	$\frac{1}{2}$	5	0.212	$1\frac{3}{8}$	$\frac{7}{8}$	$21\frac{1}{2}$	$33\frac{1}{2}$	$21\frac{3}{8}$	$33\frac{3}{8}$	4	5	2	2
$1\frac{1}{8}$	$\frac{11}{16}$	$2\frac{1}{4}$	14	$1\frac{11}{16}$	$\frac{9}{16}$	5	0.212	$1\frac{1}{2}$	1	$21\frac{1}{2}$	$33\frac{1}{4}$	$21\frac{3}{4}$	$33\frac{1}{2}$	5	10	2	15
$1\frac{1}{4}$	$\frac{13}{16}$	$2\frac{1}{2}$	15	$1\frac{29}{32}$	$\frac{9}{16}$	—	$\frac{1}{4}$	$1\frac{3}{4}$	$1\frac{1}{8}$	$23\frac{5}{8}$	$36\frac{1}{8}$	$23\frac{9}{16}$	$36\frac{1}{16}$	7	10	3	15
$1\frac{3}{8}$	$\frac{7}{8}$	$2\frac{3}{4}$	15	$2\frac{3}{8}$	$\frac{5}{8}$	—	$\frac{1}{4}$	$1\frac{7}{8}$	$1\frac{1}{8}$	$23\frac{5}{8}$	$35\frac{7}{8}$	$24\frac{1}{16}$	$36\frac{5}{16}$	8	10	4	5
$1\frac{1}{2}$	1	$3\frac{1}{8}$	16	$2\frac{3}{8}$	$\frac{5}{8}$	—	$\frac{1}{4}$	2	$1\frac{1}{4}$	$25\frac{7}{8}$	$38\frac{7}{8}$	$26\frac{1}{16}$	$39\frac{1}{16}$	10	5	5	2
$1\frac{3}{4}$	$1\frac{1}{8}$	$3\frac{1}{2}$	16	3	$\frac{3}{4}$	—	$\frac{1}{4}$	$2\frac{5}{16}$	$1\frac{1}{2}$	$27\frac{1}{2}$	40	$27\frac{1}{2}$	40	14	0	7	0
2	$1\frac{1}{4}$	4	16	3	$\frac{3}{4}$	—	$\frac{5}{16}$	$2\frac{3}{8}$	$1\frac{3}{4}$	$29\frac{1}{2}$	$41\frac{1}{2}$	$29\frac{1}{4}$	$41\frac{1}{4}$	18	10	9	5
$2\frac{1}{8}$	$1\frac{3}{8}$	$4\frac{1}{4}$	16	$3\frac{1}{4}$	$\frac{3}{4}$	—	$\frac{5}{16}$	$2\frac{7}{8}$	$1\frac{7}{8}$	$30\frac{1}{2}$	$42\frac{1}{4}$	30	$41\frac{3}{4}$	20	0	10	0
$2\frac{1}{4}$	$1\frac{1}{2}$	$4\frac{3}{4}$	16	$3\frac{1}{2}$	$\frac{7}{8}$	—	$\frac{3}{8}$	3	2	$31\frac{1}{2}$	43	$30\frac{3}{4}$	$42\frac{1}{4}$	23	0	11	10

* Where lock nuts are fitted, dimension H (closed) will be increased by twice the thickness of one nut.
†The maximum recommended safe working load is approximately one-sixth of the nominal breaking strength of 6 x 19 construction, 100/110 tons per sq. in. wire ropes as specified in Table 1 of B.S. 302/621, 'Steel wire ropes for cranes, excavators, and general engineering purposes', of the size given in Column 2 above.

WEB-BELT LIFTING SLINGS — NYLON

L325 TYPE AL4 REVERSE EYE SLING

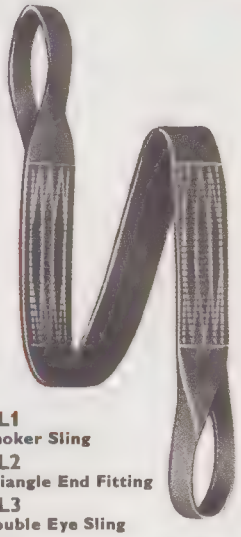
Also available
AL1, AL2, AL3, AL5

SAFEWORKING LOADS — SAFETY FACTOR 6-1

Belt Width	Straight Pull Choker Hitch	Basket Hitch			
		Legs Vertical	30°	60°	90°
2″	18 cwts.	36 cwts.	34 cwts.	30 cwts.	25 cwts.
3″	27 cwts.	54 cwts.	51 cwts.	45 cwts.	37 cwts.
4″	36 cwts.	72 cwts.	69 cwts.	61 cwts.	50 cwts.
5″	45 cwts.	90 cwts.	86 cwts.	77 cwts.	62 cwts.
6″	54 cwts.	108 cwts.	104 cwts.	93 cwts.	75 cwts.
8″	72 cwts.	144 cwts.	139 cwts.	124 cwts.	101 cwts.

STOCK LENGTHS AVAILABLE — Range of Belts: Widths 1″ to 24″, Lengths as required.

2″ Wide	4′	6′	–	8′	–	10′	12′	–
3″ Wide	4′	6′	7′	8′	9′	10′	12′	–
4″ Wide	4′	6′	–	8′	–	10′	12′	16′



AL1
Choker Sling
AL2
Triangle End Fitting
AL3
Double Eye Sling
AL5
Endless Sling

ROPE AND CORDAGE

SISAL AND MANILLA ROPE

SAFETY FACTOR: It is recommended that for ropes employed for lifting purposes a safety factor of 6 be chosen as a ratio between the minimum breaking load specified in this table to the maximum dead working load of the rope. While the safety factor of 6 is recommended as a minimum for new ropes it is in many instances desirable to increase this to 7 or 8 where the conditions are adverse and warrant such a course being taken.

L326 ROPE SLINGS
Supplied as required

L327 SISAL LASHINGS
1 & 2 Ply 7 lb. Balls

L328 COUNTER TWINE
1 lb. Balls

L329 SEWING TWINE
½ lb. Hanks 3 Ply & 5 Ply

L330 SAIL TWINE
3 Ply 4 oz. Reels

L331 MARLINE — Common Tarred
1 & 7 lb. Balls

L332 YACHT MARLINE — Tarred
8 oz. Balls

L333 BRAIDED SASH CORD
in 12 yd. Hanks

Circum.	½″	⅝″	11/16″	¾″	⅞″	1″	1⅛″
No.	5	6	7	8	9	10	11

For Synthetic Rope See Page 195

Nominal Circumference	Approximate Diameter	Weight per 100 Feet Lbs.	Weight per Coil (720 Feet)	Minimum Breaking Load Tons - cwt.
½″	5/32″	0.9	6½	2¾
⅝″	3/16″	1.2	8½	3½
¾″	7/32″	1.9	14	5¼
⅞″	¼″	2.4	17½	6¾
1″	5/16″	3.1	23	9½
1⅛″	11/32″	3.9	1 1	10½
1¼″	⅜″	5.0	1 9	12½
1⅜″	7/16″	5.6	1 13	15¾
1½″	½″	6.5	1 20	18¾
1¾″	9/16″	9.3	2 12	1 5¼
2″	⅝″	13.1	3 12	1 15½
2¼″	¾″	16.2	1 0 7	2 2½
2½″	13/16″	19.9	1 1 6	2 16½
2¾″	⅞″	23.4	1 2 4	3 7
3″	1″	28.0	1 3 10	4 0
3¼″	1 1/16″	32.7	2 0 16	4 13
3½″	1⅛″	38.5	2 2 3	5 6½
3¾″	1¼″	43.0	2 3 8	6 1½
4″	1 5/16″	50.2	3 1 5	6 16½
4½″	1 7/16″	63.0	4 0 15	8 10
5″	1⅝″	78.3	5 0 15	10 7
5½″	1¾″	94.6	6 0 23	12 8
6″	1 15/16″	112.2	7 1 12	14 12
6½″	2⅛″	132.0	8 2 18	17 0
7″	2¼″	153.0	10 0 4	19 12
8″	2½″	199.8	13 0 12	25 4
9″	2⅞″	252.3	16 2 6	31 10
10″	3¼″	312.0	20 1 24	38 12
11″	3½″	377.3	24 3 0	46 8
12″	3¾″	448.6	29 1 20	55 0
13″	4⅛″	526.9	34 2 7	64 4
14″	4½″	611.0	40 0 9	74 0
15″	4¾″	701.0	45 3 26	85 0
16″	5⅛″	797.9	52 1 10	96 10

ROPE PULLEY BLOCKS AND SNATCH BLOCKS

Pulley Blocks are available in Single, Double or Treble. All Blocks can be supplied with Hook or Eye
Single and Double Blocks are fitted with Becket, other Blocks can be fitted if specified.

Approved by the N.S.W. Dept. of Labour and Industry, Lifts and Scaffolding Section. All working loads specified on blocks.

L334

Single Sheave

L335

Double Sheave

L336

Treble Sheave

L337

Snatch Block

MANILLA ROPE BLOCKS Fitted with Hook or with Eye

SAFE WORKING LOADS IN CWTS.

Sheave Dia.	Rope Dia.	Bore of Sheave	Single Fixed	Single Moving	Double Fixed	Double Moving	Treble Fixed	Treble Moving	Snatch Fixed	Snatch Moving
			cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
2½″	⅜″	½″	2	4	3½	5	4	5	—	—
3″	½″	9/16″	2½	5	7	10	8	10	2½	5
3½″	½″	⅝″	2½	5	7	10	8	10	2½	5
4″	⅝″	¾″	5	10	11	15	12	15	5	10
4½″	⅝″	13/16″	5	10	11	15	12	15	5	10
5″	⅞″	1″	7½	15	14	20	16	20	7½	15
6″	1″	1⅛″	10	20	22	30	24	30	10	20
7″	1⅛″	1¼″	17	35	44	60	49	60	17	35
8″	1⅜″	1½″	50	50	56	75	65	75	25	50
9″	1½″	1½″	30	60	56	75	65	75	30	60
10″	1¾″	1⅞″	40	80	74	100	82	100	40	80

* NOTE: 2½″ Manilla Rope Blocks not approved on account of the rope being less than ½″ diameter.

HAND OPERATED WIRE ROPE BLOCKS

SAFE WORKING LOADS IN CWTS.

Sheave Dia.	Rope Dia.	Bore of Sheave	Single Fixed	Single Moving	Double Fixed	Double Moving	Treble Fixed	Treble Moving	Snatch Fixed	Snatch Moving
			cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
2½″	3/16″	½″	2½	5	3½	5	4	5	2½	5
3″	¼″	9/16″	2½	5	7	10	8	10	2½	5
3½″	9/16″	⅝″	2½	5	7	10	8	10	2½	5
4″	5/16″	¾″	5	10	11	15	12	15	5	10
4½″	⅜″	13/16″	5	10	11	15	12	15	5	10
5″	7/16″	1″	7½	15	14	20	16	20	7½	15
6″	½″	1⅛″	10	20	22	30	24	30	10	20
7″	9/16″	1¼″	20	40	44	60	49	60	20	40
8	⅝″	1½″	20	40	59	80	65	80	20	40
9″	¾″	1½″	25	50	59	80	65	80	25	50
10″	13/16″	1⅝″	30	60	74	100	82	100	30	60

Details of Power Operated Wire Rope Pulley Blocks will be supplied on request

SPARE PARTS FOR ALL BLOCKS CAN BE SUPPLIED

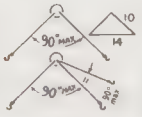
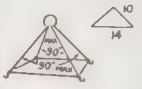
WIRE ROPE SLINGS

SUPPLIED IN SIZE, LENGTH AND TYPE TO SUIT YOUR NEEDS

SAFE WORKING LOADS FOR STEEL WIRE ROPE SLINGS

Manufactured from 6/24 Flexible Wire Rope
Breaking Strength of wire — 80 Tons per Sq. Inch

L338

Rope Circumference	Approx. Rope Diameter	Single Sling or snotter		Nip or Reevable Sling		2, 3 or 4 Leg Sling				4 Leg Sling Flexible Load Only	
													
		Tons	cwts	Tons	cwts	Tons	cwts	Tons	cwts	Tons	cwts	Tons	cwts
$\frac{5}{8}$″	$\frac{3}{16}$″	0	3	0	1½	0	6	0	5	0	4	0	8
$\frac{3}{4}$″	$\frac{1}{4}$″	0	4½	0	2½	0	8½	0	8	0	6½	0	13
$\frac{7}{8}$″	$\frac{9}{32}$″	0	6	0	3	0	11½	0	10½	0	8½	0	17
1″	$\frac{5}{16}$″	0	8	0	4	0	15	0	14	0	11½	1	3
1$\frac{1}{8}$″	$\frac{3}{8}$″	0	11	0	5½	1	1	0	19	0	15½	1	11
1$\frac{1}{4}$″	$\frac{13}{32}$″	0	13	0	6½	1	5	1	3	0	18½	1	17
1$\frac{3}{8}$″	$\frac{7}{16}$″	0	16	0	8	1	11	1	8	1	3	2	6
1$\frac{1}{2}$″	$\frac{15}{32}$″	0	19	0	9½	1	17	1	13	1	7	2	14
1$\frac{5}{8}$″	$\frac{1}{2}$″	1	2	0	11	2	3	1	18	1	11	3	2
1$\frac{3}{4}$″	$\frac{9}{16}$″	1	5	0	13	2	8	2	3	1	15	3	10
1$\frac{7}{8}$″	$\frac{19}{32}$″	1	9	0	15	2	16	2	10	2	1	4	2
2″	$\frac{5}{8}$″	1	14	0	17	3	6	2	19	2	8	4	16
2$\frac{1}{8}$″	$\frac{11}{16}$″	1	18	0	19	3	13	3	6	2	14	5	8
2$\frac{1}{4}$″	$\frac{23}{32}$″	2	2	1	1	4	2	3	14	3	0	6	0
2$\frac{3}{8}$″	$\frac{3}{4}$″	2	7	1	4	4	11	4	1	3	6	6	12
2$\frac{1}{2}$″	$\frac{13}{16}$″	2	14	1	7	5	5	4	14	3	17	7	14
2$\frac{3}{4}$″	$\frac{7}{8}$″	3	4	1	12	6	4	5	11	4	11	9	2
3″	$\frac{15}{16}$″	3	15	1	18	7	6	6	11	5	7	10	14
3$\frac{1}{4}$″	1$\frac{1}{16}$″	4	11	2	6	8	16	7	17	6	8	12	16
3$\frac{1}{2}$″	1$\frac{1}{8}$″	5	4	2	12	10	1	9	0	7	7	14	14
3$\frac{3}{4}$″	1$\frac{3}{16}$″	5	18	2	19	11	8	10	5	8	7	16	14
4″	1$\frac{1}{4}$″	6	17	3	9	13	5	11	18	9	14	19	8
4$\frac{1}{4}$″	1$\frac{3}{8}$″	7	13	3	17	14	16	13	5	10	17	21	14
4$\frac{1}{2}$″	1$\frac{7}{16}$″	8	10	4	5	16	10	14	15	12	1	24	2
4$\frac{3}{4}$″	1$\frac{1}{2}$″	9	13	4	17	18	13	16	14	13	13	27	6
5″	1$\frac{5}{8}$″	10	12	5	6	20	9	18	7	15	0	30	0
5$\frac{1}{4}$″	1$\frac{11}{16}$″	11	12	5	16	22	8	20	2	16	8	32	16
5$\frac{1}{2}$″	1$\frac{3}{4}$″	12	12	6	6	24	8	21	17	17	17	35	14
5$\frac{3}{4}$″	1$\frac{13}{16}$″	14	0	7	0	27	1	24	5	19	16	39	12
6″	1$\frac{7}{8}$″	15	3	7	12	29	6	26	5	21	9	42	18

NOTE:—Safe Loads for Heavy Duty or Rough Usage shall be reduced to 4/5ths. of the above values.

WIRE ROPE SLINGS ARE SUPPLIED WITH THIMBLES OR SOFT EYE. HAND SPLICED OR TALURET (MACHINE) SPLICED to Department of Labour and Industry Requirements.

ROPE SOCKETS DROP FORGED

WEDGE TYPE AND METALLING TYPE WIRE ROPE SOCKETS

DIMENSIONS IN INCHES

Nominal Size (Diameter of Rope)	For Ropes Sized by Circumference*	A	B	C	D Dia.	E Dia.	F Dia.	J	K Dia.	L	M	O Dia.	Q	Split Cotter Pin Dia.	Proof Load† tons	Maximum Recommended Working Load Tons
5/16	1	1 1/16	1 1/4	1 3/16	3/8	3/8	5/8	3 1/2	1/2	5/8	1 1/4	1 1/8	1 11/16	1/8	1 1/2	3/4
3/8	1 1/4	2	1 11/16	1 1/2	13/16	15/32	3/4	4 7/16	5/8	7/8	1 11/16	1 1/2	2 1/8	1/8	2	1
7/16	1 3/8	2	1 11/16	1 1/2	13/16	17/32	7/8	4 7/16	5/8	7/8	1 11/16	1 1/2	2 1/8	1/8	2 1/2	1 1/4
1/2	1 5/8	2 3/8	2 1/16	1 3/4	15/16	19/32	1	5 5/16	11/16	1 1/8	1 7/8	1 3/4	2 7/16	5/32	4	2
9/16	1 3/4	2 3/8	2 1/16	1 3/4	15/16	21/32	1 1/8	5 5/16	11/16	1 1/8	1 7/8	1 3/4	2 7/16	5/32	4 1/2	2 1/4
5/8	2	2 3/4	2 1/2	2	1 1/8	23/32	1 1/4	6 1/4	11/16	1 1/4	2 5/16	2	2 11/16	3/16	6	3
3/4	2 3/8	3	2 5/8	2 7/16	1 5/16	27/32	1 1/2	6 7/8	1 1/8	1 1/2	2 3/4	2 1/2	3 3/8	3/16	8 1/2	4 1/4
7/8	2 3/4	3 3/8	3	2 3/4	1 3/8	1	1 3/4	7 3/4	1 1/4	1 11/16	3 1/16	2 3/4	3 3/4	7/32	11	5 1/2
1	3 1/8	4 1/8	3 1/2	3 1/4	1 15/16	1 1/8	2	9 5/16	1 1/2	1 7/8	3 1/2	3 3/8	4 5/16	1/4	15	7 1/2
1 1/8	3 1/2	4 1/2	4	3 5/8	2 1/4	1 1/4	2 1/4	10 5/16	1 5/8	2	3 11/16	3 5/8	4 1/2	1/4	19	9 1/2
1 1/4	4	5 1/4	4 3/8	4 1/4	2 1/2	1 3/8	2 1/2	11 11/16	1 7/8	2 1/8	4 3/8	4 1/8	5 3/8	5/16	23	11 1/2
1 3/8	4 1/2	6	4 1/2	5	2 3/4	1 9/16	3	13	2 1/4	2 9/16	5 5/16	5	6 1/2	3/8	28	14
1 1/2	4 3/4	6	4 1/2	5	2 3/4	1 11/16	3	13	2 1/4	2 9/16	5 5/16	5	6 1/2	3/8	33	16 1/2
1 5/8	5	6	4 1/2	5	2 3/4	1 13/16	3	13	2 1/4	2 9/16	5 5/16	5	6 1/2	3/8	38	19

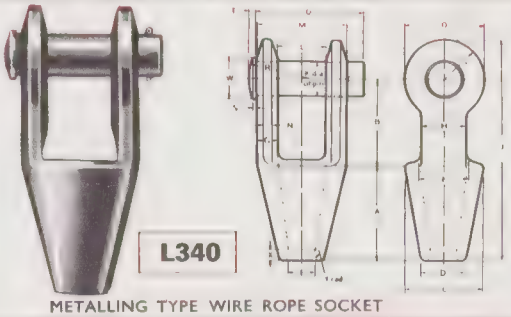
* The largest circumference of wire rope for which the socket is suitable.

NOTES: (1) For wire ropes of intermediate sizes, the next larger size of socket shall be used. (2) Socket pins are suitable only for loads equally distributed throughout their lengths.

† The proof loads specified are based on approximately two-fifths of the nominal breaking strength of 6 x 19 construction, 110/120 tons/sq. in. wire ropes as specified in Table 1, B.S. 302/621, 'Steel wire ropes for cranes, excavators, and general engineering purposes'.

L339

WEDGE TYPE WIRE ROPE SOCKETS

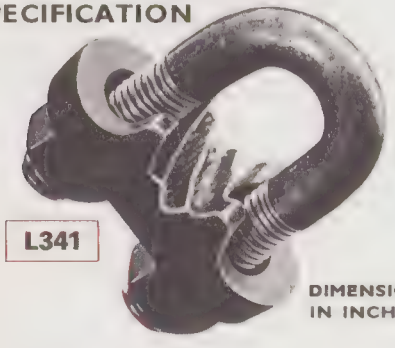


L340

METALLING TYPE WIRE ROPE SOCKET

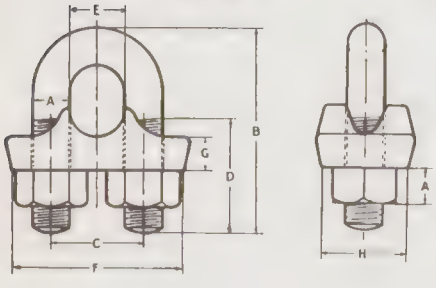
WIRE ROPE GRIPS

BLACK OR GALVANISED TO BRITISH STANDARD SPECIFICATION



L341

DIMENSIONS IN INCHES



It is recommended that the following minimum number of Bull Dog Grips be fitted at each connection:

Diameter of wire rope	Not less than
Up to and including 3/4" diameter	3
Over 3/4", up to and including 1 1/4"	4
Over 1 1/4", up to and including 1 1/2"	5
Over 1 1/2", up to and including 2"	6
Over 2" diameter	7

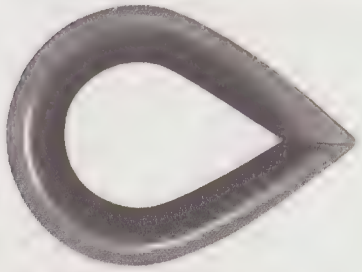
Correct Method of Fitting Bull Dog Grips

Incorrect Method of Fitting Bull Dog Grips

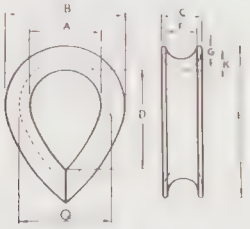
Circumference of Rope	Diameter of Rope Approx.	A	B	C	D	E	F	G	H
3/4	1/4	1/4	1 1/4	9/16	3/4	5/16	1 1/4	1/4	3/4
1	5/16	5/16	1 5/8	11/16	7/8	3/8	3/8	5/16	7/8
1 1/4	3/8	3/8	1 7/8	13/16	1	7/16	1 5/8	3/8	1 5/16
1 3/8	7/16	7/16	2 1/8	15/16	1 1/4	1/2	2	3/8	1 1/16
1 1/2	1/2	1/2	2 1/2	1 1/8	1 3/8	3/8	2 1/4	7/16	1 1/8
1 3/4	9/16	1/2	2 5/8	1 3/16	1 3/8	11/16	2 3/8	1/2	1 3/16
2	5/8	9/16	2 7/8	1 5/16	1 1/2	3/4	2 1/2	1/2	1 1/4
2 1/4	3/4	9/16	3 1/8	1 7/16	1 3/4	7/8	2 5/8	1/2	1 5/16
2 3/4	7/8	5/8	3 5/8	1 5/8	2	1	2 7/8	5/8	1 3/8
3 1/8	1	3/4	4 1/8	1 7/8	2 1/8	1 1/8	3 1/4	3/4	1 5/8
3 1/2	1 1/8	3/4	4 1/2	2	2 1/4	1 1/4	3 1/2	3/4	1 11/16
4	1 1/4	3/4	4 3/4	2 1/8	2 1/2	1 3/8	3 3/4	3/4	1 7/8
4 1/2	1 3/8	7/8	5 1/2	2 1/2	3	1 5/8	4 1/4	3/4	2
4 3/4	1 1/2	7/8	5 1/2	2 1/2	3	1 5/8	4 1/4	3/4	2
5	1 5/8	1	6 1/4	2 3/4	3 1/2	1 3/4	4 3/4	1/16	2 1/8
5 1/2	1 3/4	1	7	2 7/8	3 3/4	1 7/8	5	7/8	2 1/4
6	2	1 1/8	7 1/2	3 1/4	4	2 1/8	5 1/2	1	2 3/8
6 1/2	2 1/8	1 1/8	8	3 3/8	4 1/4	2 1/4	5 3/4	1 1/8	2 1/2
7	2 1/4	1 1/8	8 1/4	3 1/2	4 1/2	2 3/8	6	1 5/16	2 3/4

ORDINARY THIMBLES TO B.S.S. 464

DIMENSIONS IN INCHES



L342 ORDINARY THIMBLE



Nominal Size (Diameter) of Rope)	For Ropes Sized by Circum-ference	A	B	C *(min.)	D	E	F *(min.)	G	K *(min.)	Q
5/16	1	7/8	1 1/2	1/2	1 5/16	2 1/8	5/16	5/32	5/32	1 3/16
3/8	1 1/4	1	1 7/8	9/16	1 1/2	2 1/2	13/32	1/4	3/16	1 5/8
7/16	1 1/2	1 1/8	2 1/8	11/16	1 5/8	2 7/8	1/2	5/16	3/16	1 1/2
1/2	1 5/8	1 1/4	2 5/16	13/16	1 3/4	3 1/8	9/16	5/16	7/32	1 11/16
9/16	1 3/4	1 1/4	2 5/16	13/16	1 3/4	3 1/8	9/16	5/16	7/32	1 11/16
5/8	2	1 5/8	2 15/16	7/8	2 5/16	3 7/8	5/8	11/32	5/16	2 1/4
11/16	2 1/4	1 3/4	3 1/8	1 1/8	2 5/8	4 1/4	3/4	3/8	5/16	2 3/8
3/4	2 3/8	2	3 5/8	1 1/8	2 7/8	4 7/8	13/16	7/16	3/8	2 3/4
13/16	2 1/2	2	3 5/8	1 1/8	2 7/8	4 7/8	13/16	7/16	3/8	2 3/4
7/8	2 3/4	2 1/4	4	1 1/4	3 1/4	5 1/4	7/8	1/2	3/8	3
15/16	3	2 1/2	4 5/16	1 5/16	3 5/8	5 3/4	1	1/2	13/32	3 5/16
1	3 1/4	2 3/4	4 11/16	1 3/8	4 1/4	6 3/8	1 1/16	9/16	13/32	3 9/16
1 1/8	3 1/2	3	5 1/4	1 1/2	4 3/8	7	1 1/8	5/8	1/2	4
1 1/4	4	3 3/4	6	1 5/8	5 1/4	7 3/4	1 5/16	5/8	1/2	4 3/4
1 3/8	4 1/2	4 1/8	6 7/8	1 7/8	6	9	1 1/2	3/4	5/8	5 3/8
1 1/2	5	4 1/2	7 3/4	2 1/8	6 1/2	10	1 5/8	15/16	11/16	5 7/8
1 5/8	5 1/4	4 1/2	7 3/4	2 3/16	6 1/2	10	1 11/16	15/16	11/16	5 7/8
1 3/4	5 1/2	5	9	2 1/4	7	11 1/4	2	1	1	7
1 7/8	6	5 1/4	9 3/4	2 5/8	7 1/2	12 1/2	2 3/8	1 1/8	1 1/8	7 1/2
2	6 1/4	5 1/2	10 1/8	2 3/4	8	13	2 1/2	1 3/16	1 1/8	7 3/4
2 1/8	6 1/2	5 1/2	10 1/8	2 3/4	8	13	2 1/2	1 3/16	1 1/8	7 3/4
2 1/4	7	5 3/4	10 5/8	3	8 1/2	14	2 5/8	1 1/4	1 3/16	8 1/8
2 1/2	8	6 1/4	12 1/4	3 3/4	9 1/2	16 1/4	2 3/4	1 3/4	1 1/4	8 3/4
2 3/4	9	8	16	4 3/4	10 3/4	19 3/4	3 3/8	2 3/8	1 5/8	11 1/4

NOTE: For Wire Ropes of intermediate sizes the next larger size of Thimble shall be used.

* These minimum dimensions apply to Thimbles of nominal sizes from 7/16" to 1 3/8".

APPROXIMATE WEIGHTS AND BREAKING STRAINS OF SYNTHETIC FIBRE ROPES

SIZE CIRCUMFERENCE	NYLON		TERYLENE		KURALON	
	Approx. Breaking Strain	Approx. Weight per 100 Feet	Approx. Breaking Stain	Approx. Weight per 100 Feet	Approx. Breaking Strain	Approx. Weight per 100 Feet
3/8"	480 lbs.	.5 lbs.	425 lbs.	.5 lbs.	187 lbs.	.387 lbs.
1/2"	675 ,,	.875 ,,	600 ,,	.9 ,,	320 ,,	.646 ,,
5/8"	875 ,,	1.25 ,,	775 ,,	1.35 ,,	518 ,,	1.036 ,,
3/4"	1250 ,,	1.75 ,,	1120 ,,	2.01 ,,	738 ,,	1.554 ,,
7/8"	1700 ,,	2.3 ,,	1500 ,,	2.64 ,,	1005 ,,	2.07 ,,
1"	2240 ,,	3 ,,	2000 ,,	3.61 ,,	1280 ,,	2.59 ,,
1 1/8"	2800 ,,	4 ,,	2500 ,,	4.38 ,,	1610 ,,	3.29 ,,
1 1/4"	3500 ,,	4.7 ,,	3100 ,,	5.4 ,,	2030 ,,	3.93 ,,
1 1/2"	5000 ,,	6.6 ,,	4480 ,,	7.8 ,,	3000 ,,	5.97 ,,
1 3/4"	7000 ,,	9.2 ,,	6100 ,,	10.6 ,,		
2"	8960 ,,	12 ,,	8000 ,,	13.8 ,,		
2 1/4"	5 tons	15 ,,	4 1/2 tons	17.5 ,,		
2 1/2"	6 1/4 ,,	19 ,,	5 1/2 ,,	22 ,,		
2 3/4"	7 1/2 ,,	23 ,,	6 3/4 ,,	26 ,,		
3"	9 ,,	27 ,,	8 ,,	31 ,,		
3 1/4"	10 1/2 ,,	32 ,,	9 1/2 ,,	36 ,,		
3 1/2"	12 ,,	37 ,,	10 ,,	42 ,,		
3 3/4"	13 1/2 ,,	42 ,,	12 ,,	48 ,,		
4"	15 1/2 ,,	48 ,,	13 1/2 ,,	55 ,,		
4 1/2"	19 ,,	61 ,,	17 ,,	70 ,,		
5"	23 1/2 ,,	75 ,,	20 3/4 ,,	86 ,,		
5 1/2"	28 ,,	91 ,,	25 ,,	104 ,,		
6"	33 ,,	108 ,,	29 ,,	124 ,,		

GALVANISED WIRE ROPE

L343 6 x 19 CONSTRUCTION **L344** 6 x 24 CONSTRUCTION **L345** 6 x 37 CONSTRUCTION

Circumference Inches	Diameter Inches	Approx. Weight per Foot Lbs.	Actual Breaking Strain, Tons (Best Patent 80/90 Tons Sq. In.)	Circumference Inches	Diameter Inches	Approx. Weight per Foot Lbs.	Actual Breaking Strain, Tons (Best Patent 80/90 Tons Sq. In.)	Circumference Inches	Diameter Inches	Approx. Weight per Foot Lbs.	Actual Breaking Strain, Tons (Best Patent 80/90 Tons Sq. In.)
1	5/16	.18	2.8	1	5/16	.16	2.4	2	5/8	.66	10.7
1 1/8	3/8	.21	3.3	1 1/8	3/8	.20	3.3	2 1/8	11/16	.74	12.1
1 1/4		.25	4.3	1 1/4		.24	4.0	2 1/4		.84	13.8
1 3/8	7/16	.30	4.9	1 3/8	7/16	.28	4.8	2 3/8	3/4	.92	14.5
1 1/2		.36	6.0	1 1/2		.33	5.7	2 1/2	13/16	1.02	16.2
1 5/8	1/2	.43	7.2	1 5/8	1/2	.39	6.6	2 3/4	7/8	1.23	19.9
1 3/4	9/16	.50	8.1	1 3/4	9/16	.47	7.5	3	15/16	1.45	24.1
2	5/8	.66	11.1	2	5/8	.60	10.3	3 1/8	1	1.59	26.2
2 1/8	11/16	.74	12.1	2 1/8	11/16	.67	11.6	3 1/4		1.72	27.4
2 1/4		.84	13.9	2 1/4		.78	12.8	3 3/8	1 1/16	1.85	29.7
2 3/8	3/4	.92	15.7	2 3/8	3/4	.86	14.1	3 1/2	1 1/8	1.98	32.2
2 1/2	13/16	1.02	17.0	2 1/2	13/16	.95	16.3	3 3/4		2.30	37.3
2 3/4	7/8	1.23	20.5	2 3/4	7/8	1.13	19.3	3 7/8	1 1/4	2.42	40.0
3	1 5/16	1.54	25.8	3	1 5/16	1.34	22.7	4		2.63	42.8
3 1/8	1	1.68	27.5	3 1/8	1	1.48	24.5	4 1/4		2.95	48.7
3 1/4		1.84	30.0	3 1/4		1.59	27.3	4 3/8	1 3/8	3.11	50.2
3 3/8	1 1/16	1.96	32.7	3 3/8	1 1/16	1.70	29.2	4 1/2		3.33	53.4
3 1/2	1 1/8	2.17	35.5	3 1/2	1 1/8	1.88	31.3	4 3/4	1 1/2	3.69	60.0
3 3/4		2.47	40.4	3 3/4		2.13	35.5	5		4.09	66.9
3 7/8	1 1/4	2.62	43.5	3 7/8	1 1/4	2.26	37.7	5 1/8	1 5/8	4.34	70.5
4		2.75	45.6	4		2.39	41.2	5 1/4		4.53	74.2
4 1/4		3.08	51.1	4 1/4		2.75	46.0	5 1/2	1 3/4	4.93	79.9
4 3/8	1 3/8	3.36	54.6	4 3/8	1 3/8	2.89	48.6	5 3/4		5.38	87.9
4 1/2		3.50	58.1	4 1/2		3.12	51.2	6	1 7/8	5.90	96.3
4 3/4	1 1/2	3.92	64.3	4 3/4	1 1/2	3.44	57.9	6 1/4	2	6.32	102.9
5		4.20	70.9	5		3.78	63.6	6 1/2		6.82	111.9
5 1/8	1 5/8	4.48	75.0	5 1/8	1 5/8	3.95	66.6				
5 1/4		4.76	79.1	5 1/4		4.13	69.6				
5 1/2	1 3/4	5.23	86.4	5 1/2	1 3/4	4.50	75.8				

NOTE: Wire Rope can be cut to any length and spliced if required. Thimbles and Wire Rope Grips are also available. A General Safety Factor of 6 : 1 applies to the Rope above.

SMALL FLEXIBLE CORDS

(Galvanised Patent Steel Wire Cords)

For Sash Cords, Fanlights, Raising and Lowering Arc Lamps, etc.

L346

6 x 19 CONSTRUCTION (Fibre Core in Rope only)

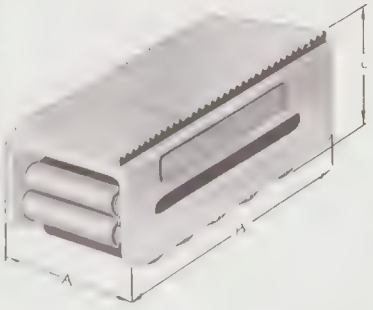
NOTE: Wire Rope can be cut to any length and spliced if required. Thimbles and Wire Rope Grips also available.

Circumference Inches	Approximate Diameter Inches	Approximate Weight Lbs. per 100 Ft.	Breaking Load Cwt.
3/8	1/8	2.9	10
1/2	5/32	4.0	14
5/8	1/4	6.3	22
3/4	5/16	9.0	32
7/8	9/32	12.0	42

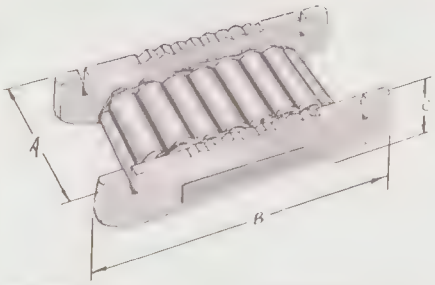
LOAD SKATES

FOR THE EASY MOVING OF MACHINING EQUIPMENT, STORES, ETC.

The Caterpillar action of the rollers allows the load to be moved easily over GOOD concrete, steel and hardwood floors. The low overall height makes it easy to place or jack the load on and off the skates. The moving of lathes into position requires two skates under the headstock and one skate under the tailstock.



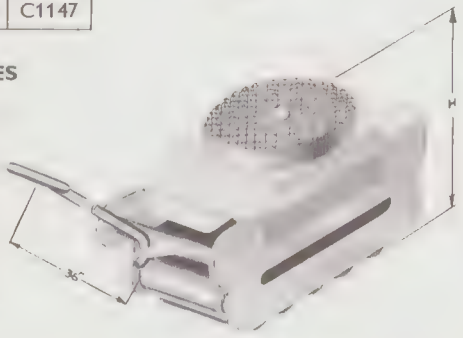
Capacity	A	B	C	Weight	Part Number
10 cwt.	$3\frac{3}{16}$″	5″	$2\frac{15}{32}$″	7 lb.	C1145
1 ton	$3\frac{5}{16}$″	$5\frac{1}{2}$″	$2\frac{17}{32}$″	$8\frac{1}{2}$ lb.	C1146
5 ton	$3\frac{9}{16}$″	$6\frac{1}{4}$″	$2\frac{25}{32}$″	$11\frac{1}{2}$ lb.	C1147



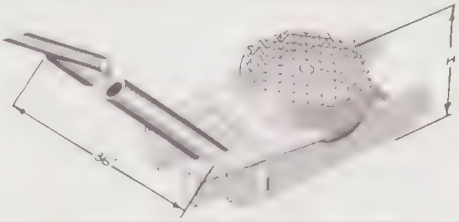
Capacity	A	B	C	Weight	Part Number
20 ton	4″	$8\frac{1}{4}$″	$2\frac{1}{2}$″	$11\frac{1}{2}$ lb.	C1115B
40 ton	$4\frac{3}{4}$″	11″	$3\frac{5}{8}$″	32 lb.	C1154
75 ton	$6\frac{3}{4}$″	14″	$4\frac{1}{8}$″	$65\frac{1}{2}$ lb.	B1155

BALL-BEARING TURNTABLES

All sizes of Load skates can be provided with Ball Bearing Turntables.



Capacity	H	Weight	Part Number
10 cwt.	$3\frac{29}{32}$″	$6\frac{1}{2}$ lb.	C1148
1 ton	$3\frac{31}{32}$″	7 lb.	C1149
5 ton	$4\frac{11}{32}$″	10 lb.	C1150

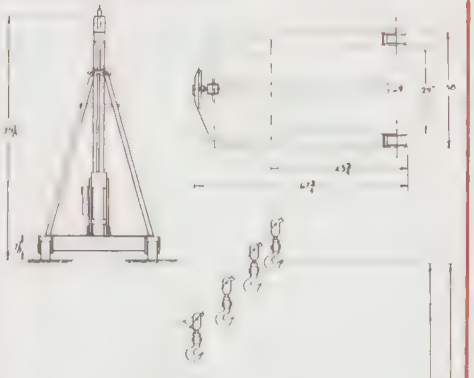


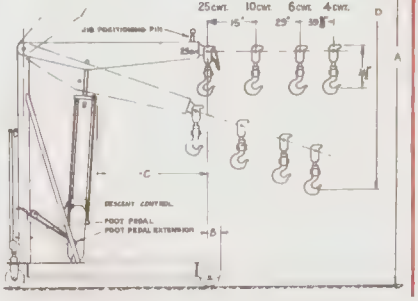
Capacity	H	Weight	Part Number
20 ton	4″	17 lb.	C1151
40 ton	$5\frac{5}{8}$″	37 lb.	C1152
75 ton	$6\frac{3}{8}$″	71 lb.	C1153

CAPACITY

Capacity listed is the maximum for one skate under ideal conditions, and can be multiplied by the number of skates being used to ascertain the load which can be carried.

25 cwt. SOLID WHEEL HYDRAULIC CRANE





	25 Cwt	10 Cwt	6 Cwt	4 Cwt
A	109″	$120\frac{1}{2}$″	$131\frac{1}{4}$″	139″
B	– $3\frac{1}{2}$″	$11\frac{1}{2}$″	$25\frac{1}{2}$″	$35\frac{7}{8}$″
C	$35\frac{1}{2}$″	$50\frac{1}{2}$″	$64\frac{1}{2}$″	$74\frac{7}{8}$″
D	$64\frac{1}{4}$″	$80\frac{3}{4}$″	$96\frac{1}{8}$″	$107\frac{3}{8}$″

HYDRAULIC PALLET TRUCK — HAND OPERATED

Capacity	2 Ton, 3 Ton
Fork Length	42″ and 57″
Fork Width	6″ and 9″
Overall Width	27″ and 20″
Lowered Height	$3\frac{3}{8}$″
Raised Height	$4\frac{1}{2}$″
Weight	325 lbs.

RIGID AND SWIVEL CASTERS

CAST IRON WHEEL CASTERS

Wheel Size	Bearing	Model			Capacity in lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
4 x 1½	DBB	C660	R493	—	500	—	—	6	3	5	2	5
				S492	500	—	1¾	5	4	4	3	5
5 x 1½	DBB	C651	R483	—	300	—	—	6	3	5	2	6
				S482	300	—	—	5	4	4	3	6
6 x 1¾	DBB	C661	R578	S577	500	—	2	7	4	6	3	7½
6 x 1¾	Prec.	C661P	R578P	S577P	1000	500	2	7	4	6	3	7½
6 x 3	Prec.	C665P	R604	S603	2000	700	2½	10	5	8½	3½	7½
8 x 1¾	DBB	C670	R587	S586	550	—	2	7	4	6	3	9¾
8 x 1¾	Prec.	C670P	R587P	S586P	1000	500	2	7	4	6	3	9¾
8 x 2¼	DBB	C671	R585	S584	750	—	2	7	4	6	3	9¾
8 x 2¼	Prec.	C671P	R585P	S584P	1300	600	2	7	4	6	3	9¾
8 x 3	Prec.	C676P	R593	S592	2000	850	2½	10	5	8½	3½	10¼
10 x 3	Prec.	C680P	R598	S597	2000	1000	2½	10	5	8½	3½	12¼

RIGID CASTER

MOULDED-ON RUBBER TYRED WHEEL CASTERS

Wheel Size	Bearing	Model			Capacity in lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
4 x 1½	DBB	C849	R491	—	300	—	—	6	3	5	2	5
				S490	300	—	1¾	5	4	4	3	5
5 x 1½	DBB	C840	R481	—	300	—	—	6	3	5	2	6
				S480	300	—	1⅞	5	4	4	3	6
6 x 1¾	Prec.	C841	R535	S534	600	450	2	7	4	6	3	7½
6 x 3	Prec.	C850P	R606	S605	1100	700	2½	10	5	8½	3½	7½
8 x 2	Prec.	C842P	R709	S708	1000	500	2	7	4	6	3	9¾
8 x 3	Prec.	C851P	R608	S607	1300	850	2½	10	5	8½	3½	10¼
10 x 3	Prec.	C852P	R610	S609	1500	1050	2½	10	5	8½	3½	12¼
12 x 3	Prec.	C853P	R601	S600	1500	1150	2½	10	5	8½	3½	14¾
12 x 4	Prec.	C761P	R603	S602	1500	1150	2½	10	5	8½	3½	14¾

DEMOUNTABLE RUBBER TYRED WHEEL CASTERS

Wheel Size ins.	Bear-ing	Model			Capacity–lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
6 x 1⅞	DBB	C716	R576	S575	400	—	2	7	4	6	3	7½
6 x 1⅞	Prec.	C716P	R576P	S575P	600	250	2	7	4	6	3	7½
8 x 1⅞	DBB	C726	R583	S582	500	—	2	7	4	6	3	9¾
8 x 1⅞	Prec.	C726P	R583P	S582P	500	350	2	7	4	6	3	9¾
8 x 2⅜	Prec.	C730P	R589	S588	1000	550	2½	10	5	8½	3½	10¼
10 x 2⅜	Prec.	C735P	R596	S595	1100	550	2½	10	5	8½	3½	12¼

SWIVEL CASTER

MOULDED-ON NYLON TYRED WHEEL CASTERS

Wheel Size ins.	Bear-ing	Model			Capacity–lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
4 x 1½	DBB	C849N	R495	—	500	—	—	6	3	5	2	5
				S494	500	—	1¾	5	4	4	3	5
5 x 1½	DBB	C840N	R485	—	500	—	—	6	3	5	2	6
				S484	500	—	1⅞	5	4	4	3	6
6 x 1¾	Prec	C841NP	R489	S488	1000	800	2	7	4	6	3	7½
6 x 3	Prec	C850NP	R612	S611	1500	1000	2½	10	5	8½	3½	7½
8 x 3	Prec.	C851NP	R614	S613	1500	1300	2½	10	5	8½	3½	10¼
10 x 3	Prec.	C852NP	R620	S619	1500	1300	2½	10	5	8½	3½	12¼
12 x 4	Prec.	C761NP	R622	S621	1800	1500	2½	10	5	8½	3½	14¾

- Bearing, DBB—Dual Ball Bearing
- Prec.—Precision Ball Bearing

DEMOUNTABLE NYLON TYRED WHEEL CASTERS

Wheel Size ins.	Bear-ing	Model			Capacity–lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
6 x 1⅞	DBB	C716N	R571	S570	600	—	2	7	4	6	3	7½
6 x 1⅞	Prec.	C716NP	R571P	S570P	1000	500	2	7	4	6	3	7½
8 x 1⅞	DBB	C726N	R573	S572	600	—	2	7	4	6	3	9¾
8 x 1⅞	Prec.	C726NP	R573P	S572P	1000	500	2	7	4	6	3	9¾
8 x 2⅜	Prec	C730NP	R618	S617	1300	900	2½	10	5	8½	3½	10¼
10 x 2⅜	Prec.	C735NP	R616	S615	1500	900	2½	10	5	8½	3½	12¼

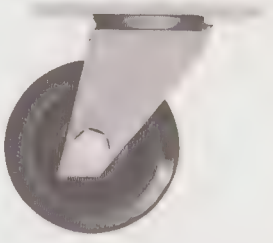
A — Length of Mounting Plate
B — Width of Mounting Plate
C, D — Pitch of Mounting Bolt Holes
H — Height Overall
Rake — C/L of Wheel to C/L of Swivel Pin

ALL NYLON WHEEL CASTERS

Wheel Size ins.	Bearing	Model			Capacity–lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
4 x 1⅜	Plain	400N	R497		350			6	3	5	2	5
				S496	350		1¾	5	4	4	3	5
5 x 1⅜	Plain	500N	R487		350			6	3	5	2	6
				S486	350		1⅞	5	4	4	3	6
6 x 1⅞	Prec.	601NB	R501	S500	600	400	2	7	4	6	3	7½

MOULDED-ON POLYURETHANE TYRED WHEEL CASTERS

Wheel Size ins.	Bearing	Model			Capacity–lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
6 x 1¾	Prec.	C841PP	R701	S700	500	—	2	7	4	6	3	7½
6 x 3	Prec.	C850PP	R723	S722	1500	1000	2¼	10	5	8½	3½	7½
8 x 2	Prec. Sealed	C842PP	R705	S704	500	—	2	7	4	6	3	9¾
8 x 3	Prec.	C851PP	R725	S724	1500	1000	2½	10	5	8½	3½	10¼
10 x 3	Prec.	C852PP	R727	S726	1500	1000	2½	10	5	8½	3½	12¼
12 x 4	Prec.	C761PP	R731	S730	1500	1150	2¼	10	5	8½	3½	14¾



DEMOUNTABLE POLYURETHANE TYRED WHEEL CASTERS

Wheel Size ins.	Bearing	Model			Capacity–lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
6 x 1⅞	Prec.	C716PP	R703	S702	500	350	2	7	4	6	3	7½
8 x 1⅞	Prec.	C726PP	R707	S706	500	350	2	7	4	6	3	9¾

- Bearing, DBB—Dual Ball Bearing
- Prec.—Precision Ball Bearing

SEMI PNEUMATIC

Wheel Size ins.	Bearing	Model			Capacity–lbs.		Rake ins.	A ins.	B ins.	C ins.	D ins.	H ins.
		Wheel	Rigid	Swivel	Manual	Towed						
8 x 2½	DBB	C805	R751	S750	220	—	2	6	4⅛	5¼	3⅜	9¾

PNEUMATIC

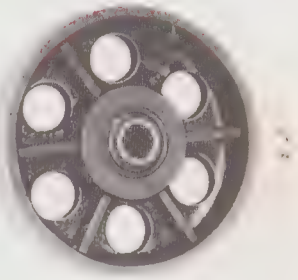
16" diam. 400 x 8 2-ply	DBB	C793	R555	S552	500	—	4½	10	6	8½	3½	18⅜

A = Length of Mounting Plate
B = Width of Mounting Plate
C, D = Pitch of Mounting Bolt Holes
H = Height Overall
Rake = C/L of Wheel to C/L of Swivel Pin

HEAVY DUTY CAST IRON WHEELS

Wheel Diam. x Width	Bearing	Axle Diam. x Boss Width	Capacity in lbs.		
			Model	Manual	Towed
3"x1¼"	Plain	½"x1½"	C611	200	—
4"x1½"	DBB	½"x2"	C660	500	—
5"x1½"	DBB	½"x2"	C651	500	—
5"x1¾"	DBB	⅝"x2½"	C650	500	—
5"x1¾"	DBB	¾"x2½"	C650A	500	—
6"x1¾"	DBB	¾"x2½"	C661	500	—
6"x1¾"	DBB	¾"x2½"	C661A	500	—
6"x1¾"	Prec.	¾"x2½"	C661P	1000	500
6"x2"	Plain	¾"x2½"	C617	450	—
6"x2"	Plain	¾"x2½"	C617A	450	—
6"x3"	Prec	1"x3½"	C665P	2000	700
6"x3"	Prec.	¾"x3½"	C665PA	2000	700
6"x3"	Prec.	1"x3½"	C666FP	2000	700

Wheel Diam. x Width	Bearing	Axle Diam. x Boss Width	Capacity in lbs.		
			Model	Manual	Towed
8"x1¾"	DBB	⅝"x2½"	C670	550	—
8"x1¾"	DBB	¾"x2½"	C670A	550	—
8"x1¾"	Prec	⅝"x2½"	C670P	1000	500
8"x2"	Plain	⅝"x2½"	C619	450	—
8"x2"	Plain	¾"x2½"	C619A	450	—
8"x2½"	DBB	⅝"x2½"	C671	750	—
8"x2½"	DBB	¾"x2½"	C671A	750	—
8"x2½"	Prec.	⅝"x2½"	C671P	1300	600
8"x3"	Prec.	1"x3½"	C676P	2000	850
8"x3"	Prec.	¾"x3½"	C676PA	2000	850
10"x3"	Prec.	1"x3½"	C680P	2000	1000
10"x3"	Prec.	¾"x3½"	C680PA	2000	1000



DEMOUNTABLE RUBBER TYRED WHEELS

Wheel Diam. x Width	Bearing	Axle Diam. x Boss Width	Capacity in lbs.		
			Model	Manual	Towed
6"x1⅞"	DBB	⅝"x2½"	C716	400	—
6"x1⅞"	DBB	¾"x2½"	C716A	400	—
6"x1⅞"	Prec.	⅝"x2½"	C716P	500	250
6"x1⅞"	Prec.	¾"x2½"	C716PA	600	250
8"x1⅞"	DBB	⅝"x2½"	C726	500	—
8"x1⅞"	DBB	¾"x2½"	C726A	500	—

Wheel Diam. x Width	Bearing	Axle Diam. x Boss Width	Capacity in lbs.		
			Model	Manual	Towed
8"x1⅞"	Prec.	⅝"x2½"	C726P	500	350
8"x1⅞"	Prec.	¾"x2½"	C726PA	500	350
8"x2⅜"	Prec.	1"x3½"	C730P	1100	550
8"x2⅜"	Prec.	¾"x3½"	C730PA	1100	550
10"x2⅜"	Prec.	1"x3½"	C735P	1100	550
10"x2⅜"	Prec.	¾"x3½"	C735PA	1100	550

MOULDED-ON RUBBER TYRED WHEELS

Wheel Diam. x Width	Bearing	Axle Diam. x Boss Width	Capacity in lbs. Model	Manual	Towed at 5 mph	Wheel Diam. x Width	Bearing	Axle Diam. x Boss Width	Capacity in lbs. Model	Manual	Towed at 5 mph
4″x1½″	DBB	½″x2″	C849	300	—	8″x3″	Prec.	1″x3½″	C851P	1300	850
5″x1½″	DBB	½″x2″	C840	300	—	8″x3″	Prec.	¾″x3½″	C851PA	1300	850
6″x1¾″	Prec.	⅝″x2½″	C841P	600	450	10″x3″	Prec.	1″x3½″	C852P	1500	1050
6″x3″	Prec.	1″x3½″	C850P	1100	700	10″x3″	Prec.	¾″x3½″	C852PA	1500	1050
6″x3″	Prec.	¾″x3½″	C850PA	1100	700	12″x3″	Prec.	1″x3½″	C853P	1500	1150
8″x2″	Prec.	⅝″x1¾″	C842P	1000	500	12″x4″	Prec.	1⅜″x4⅞″	C761P	1500	1150

DEMOUNTABLE NYLON TYRED 90-95 DURO

Wheel Diam. x Width	Bearing	Axle Diam. x Boss Width	Capacity in lbs. Model	Manual	Towed at 5 mph	Wheel Diam. x Width	Bearing	Axle Diam. x Boss Width	Capacity in lbs. Model	Manual	Towed at 5 mph
6″x1⅞″	DBB	⅝″x2½″	C716N	600	—	8″x1⅞″	Prec.	⅝″x2½″	C726NP	1000	500
6″x1⅞″	DBB	¾″x2½″	C716NA	600	—	8″x1⅞″	Prec.	¾″x2½″	C726NPA	1000	500
6″x1⅞″	Prec.	⅝″x2½″	C716NP	1000	500	8″x2⅝″	Prec.	1″x3½″	C730NP	1300	900
6″x1⅞″	Prec.	¾″x2½″	C716NPA	1000	500	8″x2⅝″	Prec.	¾″x3½″	C730NPA	1300	900
8″x1⅞″	DBB	⅝″x2½″	C726N	600	—	10″x2⅝″	Prec.	1″x3½″	C735NP	1500	900
8″x1⅞″	DBB	¾″x2½″	C726NA	600	—	10″x2⅝″	Prec.	¾″x3½″	C735NPA	1500	900

MOULDED-ON NYLON TYRED WHEELS 90-95 DURO

Wheel Size	Bearing	Axle Diam. x Boss Width	Model	Capacity in lbs. Manual	Towed at 5 m.p.h.
4″ x 1½″	DBB	½″ x 2″	C849N	500	—
5″ x 1½″	DBB	½″ x 2″	C840N	500	—
6″ x 1¾″	Prec.	⅝″ x 2½″	C841NP	1000	800
6″ x 3″	Prec.	1″ x 3½″	C850NP	1500	1000
6″ x 3″	Prec.	¾″ x 3½″	C850NPA	1500	1000
8″ x 3″	Prec.	1″ x 3½″	C851NP	1500	1300
8″ x 3″	Prec.	¾″ x 3½″	C851NPA	1500	1300
10″ x 3″	Prec.	1″ x 3½″	C852NP	1500	1300
10″ x 3″	Prec.	¾″ x 3½″	C852NPA	1500	1030
12″ x 4″	Prec.	1⅜″ x 4⅞″	C761NP	1800	1500

ALL NYLON

Wheel Size	Bearing	Axle Diam. x Boss Width	Model	Capacity in lbs. Manual	Towed at 5 m.p.h.
3″ x 1¼″	Plain	⅜″ x 1½″	300N	300	—
3″ x 1¼″	Plain	⅜″ x 1½″	301N	150	—
4″ x 1⅜″	Plain	⅝″ x 1 13/16″	400N	350	—
4″ x 1⅜″	Plain	⅝″ x 1 13/16″	401N	250	—
5″ x 1⅜″	Plain	⅝″ x 2 7/16″	500N	350	—
6″ x 1⅞″	Plain	⅝″ x 2 7/16″	601N	600	—
6″ x 1⅜″	Prec.	¾″ x 2 7/16″	601NB	600	400
8″ x 1⅛″	Prec.	⅝″ x 2½″	801NB	1500	1000
8″ x 1⅛″	Plain	⅝″ x 2½″	801N	600	—

PNEUMATIC WHEELS

Wheel Size	Bearing	Axle Diam. and Boss Width	Model	Capacity lbs.
16″ diam. 4.00x8, 2-ply	DBB	1″ x 3 3/16″	C793	500 Manual
16″ diam. 4.00x8, 4-ply	DBB	1″ x 3 3/16″	C794	750 Manual
16″ diam. 4.00x8, 4-ply	Timkin Tapered	Complete with 8″ Stub Axle	C795	500 lbs. up to 60 m.p.h.

• Bearing, DBB — Dual Ball Bearing

DEMOUNTABLE POLYURETHANE TYRED WHEELS

Wheel Size	Bearing	Axle Diam. x Boss Width	Model	Capacity in lbs. Manual	Towed at 5 m.p.h.
6″ x 1⅞″	Prec.	⅝″ x 2½″	C716PP	500	350
6″ x 1⅞″	Prec.	¾″ x 2½″	C716PPA	500	350
8″ x 1⅞″	Prec.	⅝″ x 2½″	C726PP	500	350
8″ x 1⅞″	Prec.	¾″ x 2½″	C726PPA	500	350

HAND TRUCK WHEELS

Wheel Size	Bearing	Axle Diam. x Boss Width	Model	Capacity in lbs. Manual	Towed at 5 m.p.h.
8″ x 1⅛″	Roller	¾″ x 1¾″	C721	250	—

SEMI PNEUMATIC

Wheel Size	Bearing	Axle Diam. x Boss Width	Model	Capacity in lbs. Manual	Towed at 5 m.p.h.
8″ x 2½″	DBB	⅝″ x 3 5/32″	C805	220	—

MOULDED-ON POLYURETHANE TYRED WHEELS

Wheel Size	Bearing	Axle Diam. x Boss Width	Model	Capacity in lbs. Manual	Towed at 5 m.p.h.
6″ x 1¾″	Prec.	⅝″ x 2½″	C841PP	1000	800
6″ x 1¾″	Prec.	¾″ x 2½″	C841PPA	1000	800
6″ x 3″	Prec.	1″ x 3½″	C850PP	1500	1000
6″ x 3″	Prec.	¾″ x 3½″	C850PPA	1500	1000
8″ x 2″	Prec.	⅝″ x 1¾″	C842PP	1000	500
8″ x 2″	Sealed	¾″ x 1¾″	C842PPA	1000	500
8″ x 3″	Prec.	1″ x 3½″	C851PP	1500	1000
8″ x 3″	Prec.	¾″ x 3½″	C851PPA	1500	1000
10″ x 3″	Prec.	1″ x 3½″	C852PP	1500	1000
10″ x 3″	Prec.	¾″ x 2½″	C852PP	1500	1000
12″ x 4″	Prec.	1⅜″ x 4⅞″	C761PP	1500	1000

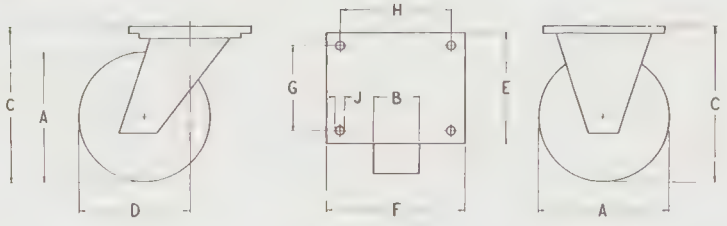
• Prec. — Precision Ball Bearing.

"BASSICK" EXTRA HEAVY DUTY CASTERS

POWER PULLED TRAILER OPERATION

Series "TT" — Rigid — Companion rigid casters match the swivel casters in all dimensions. They have similar wheels and bearings and are constructed of the same heavy gauge steel.

Series "TS" — Swivel — $\frac{5}{8}$" diameter hardened steel balls operate on a $6\frac{1}{2}$" diameter, accurately machined ball race to ensure maximum ease of swivelling.



Wheel			Catalogue Numbers		Load Capacity Each (lbs.)	Overall Height C	Swivel Radius D	Top Plate		
Dia. A	Tread Width B	Type	Swivel Caster Roller Bearing	Rigid Caster Roller Bearing				Size E x F	Bolt Hole Spacing G x H	Bolt Hole Size
8"	3"	"Meehanite"	8TS1-2	8TT1-2	2000	$10\frac{3}{8}$"	$7\frac{3}{4}$"	$7\frac{3}{4}$"x$9\frac{3}{4}$"	$6\frac{1}{4}$"x$8\frac{1}{4}$"	$\frac{21}{32}$"
10"	3"	"Meehanite"	10TS1-2	10TT1-2	2000					
	3"	Rubber Tread on Iron Core	10TS6R-2	10TT6R-2	830	$12\frac{9}{16}$"	$8\frac{5}{8}$"	$7\frac{3}{4}$"x$9\frac{3}{4}$"	$6\frac{1}{4}$"x$8\frac{1}{4}$"	$\frac{21}{32}$"
12"	3"	Rubber Tread on Iron Core	12TS6R-2	12TT6R-2	950	$14\frac{9}{16}$"	$9\frac{3}{4}$"	$7\frac{3}{4}$"x$9\frac{3}{4}$"	$6\frac{1}{4}$"x$8\frac{1}{4}$"	$\frac{21}{32}$"

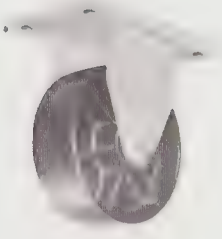
"BASSICK" HEAVY DUTY TRUCK CASTERS

WITH ROLLER BEARING WHEELS

The "BS", "CS" Swivel and "BT", "CT" matching Rigid Heavy Duty truck casters.

Wheel Diameter	A	6"	8"
Overall Height	C	$7\frac{1}{2}$"	$9\frac{3}{4}$"
Swivel Radius	D	$4\frac{7}{8}$"	6"
Top Plate Size	E x F	4" x 7"	4" x 7"
Bolt Hole Spacing	G x H	3" x 6"	3" x 6"
Bolt Hole Size	J	$\frac{13}{32}$"	$\frac{13}{32}$"

SWIVEL CASTER



RIGID CASTER

"BS" SWIVEL — "BT" RIGID CASTER RANGE

Wheel			Catalogue Numbers		Lbs. Load Capacity per caster
Diam.	Type	Tread Width	Swivel Type Roller Bearing	Rigid Type Roller Bearing	
6"	Meehanite	2"	6BS1-2	6BT1-2	750
	Baco	2"	6BS6-2	6BT6-2	475
	Atlasite	2"	6BS9-2	6BT9-2	650
	Side Plate	$1\frac{13}{16}$"	*6BS4R-2	*6BT4R-2	475
8"	Meehanite	2"	8BS1-2	8BT1-2	750
	Baco	2"	8BS6-2	8BT6-2	475
	Atlasite	2"	8BS9-2	8BT9-2	650
	Side Plate	$1\frac{13}{16}$"	*8BS4R-2	*8BT4R-2	475

* Ball Bearing Wheel

"CS" SWIVEL — "CT" RIGID CASTER RANGE

Wheel			Catalogue Numbers				Lbs. Load Capacity per Caster
			Swivel Type		Rigid Type		
Diam.	Type	Tread Width	Roller Bearing	Sealed Roller Bearing	Roller Bearing	Sealed Roller Bearing	
	Meehanite	$2\frac{1}{2}$"	6CS1-2	6CS1-7	6CT1-7	6CT1-7	900
6"	Rubber Tread on Iron Core	$2\frac{1}{2}$"	6CS6G-2	6CS6R-2	6CT6R-2	6CT6R-7	550
	Meehanite	$2\frac{1}{2}$"	8CS1-2	8CS1-7	8CT1-2	8CT1-7	1500
8"	Rubber Tread on Iron Core	$2\frac{1}{2}$"	8CS6R-2	8CS6R-7	8CT6R-2	8CT6R-7	675

"BASSICK" MEDIUM DUTY TRUCK CASTERS

SERIES "36" and "37" — TRUCK CASTERS

SERIES "36" RIGID

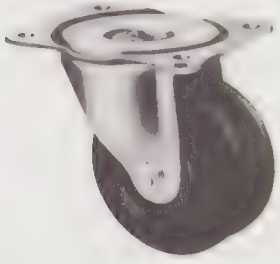
Wheel			Catalogue Number			Load Capacity Each (lbs.)	Overall Height C	Top Plate		
Dia. A	Type	Tread Width	Plain Bearing	Oiless Bearing	Roller Bearing			Size E x F	Bolt Hole Spacing G x H	Bolt Hole Size J
2½″	Meehanite	1⅛″	2361	—	—	175	3½″	2¼″×4 3/16″	1⅜″×3 5/16″	⅜″
	Baco	1⅛″	—	2366	—	100				
	Atlasite	1⅛″	—	2369	—	175				
3″	Meehanite	1¼″	3361	—	—	225	4¼″	2 9/16″×4¾″	1 1/16″×3 7/8″	⅜″
	Baco	1 5/16″	—	3366	—	125				
	Atlasite	1 5/16″	—	3369	—	225				
4″	Meehanite	1½″	4361	—	4361-2	300	5¼″	3⅛″×5 9/16″	2″ × 4 7/16″	7/16″
	Baco	1⅝″	—	4366	4366-2	225				
	Atlasite	1⅝″	—	4369	4369-2	300				
5″	Meehanite	1⅜″	5361	—	—	400	6 9/16″	3⅝″×6⅛″	2 7/16″×4 15/16″	½″
	Baco	2″	—	5366	—	250				
	Atlasite	2″	—	5369	—	400				
6″	Meehanite	2″	6361	—	6361-2	450	7 9/16″	3⅝″×6⅛″	2 7/16″×4 15/16″	½″
	Baco	2″	—	6366	6366-2	275				
	Atlasite	2″	—	6369	6369-2	400				

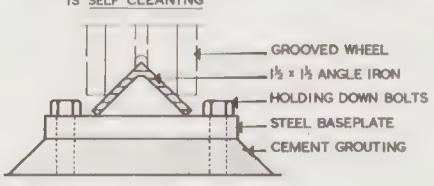
SERIES "37" SWIVEL

Wheel			Catalogue Number			Load Capacity Each lbs.	Overall Height C	Swivel Radius D	Top Plate		
Dia. A	Type	Tread Width	Plain Bearing	Oiless Bearing	Roller Bearing				Size E x F	Bolt Hole Spacing G x H	Bolt Hole Size J
2½″	Meehanite	1⅛″	2371	—	—	175	3⅝″	2″	3 1/16″×7⅛″	1¾″-2 3/16″ × 2⅞″-3″	11/32″
	Baco	1⅛″	—	2376	—	100					
	Atlasite	1⅛″	—	2379	—	175					
3″	Meehanite	1¼″	3371	—	—	225	4 5/16″	2⅜″	3¼″×4⅜″	2⅜″ × 3 5/16″-3½″	11/32″
	Baco	1 5/16″	—	3376	—	125					
	Atlasite	1 5/16″	—	3379	—	225					
4″	Meehanite	1½″	4371	—	4371-2	300	5 5/16″	3⅛″	3 11/16″×4 11/16″	2 7/16″-2 11/16″ × 3 9/16″-3 11/16″	13/32″
	Baco	1⅝″	—	4376	4376-2	225					
	Atlasite	1⅝″	—	4379	4379-2	300					
5″	Meehanite	1⅝″	5371	—	—	400	6 9/16″	3¾″	4⅛″×6⅛″	2 7/16″×4 15/16″	½″
	Baco	2″	—	5376	—	250					
	Atlasite	2″	—	5379	—	400					
6″	Meehanite	2″	6371	—	6371-2	450	7 9/16″	4½″	4⅛″×6⅛″	2 7/16″×4 15/16″	½″
	Baco	2″	—	6376	6376-2	275					
	Atlasite	2″	—	6379	6379-2	450					

Thread Guards available on all sizes. Prefix Caster Number with letters T.G.

"BASSICK" V-GROOVED WHEEL CASTERS





Swivel Caster with V-Grooved Wheel

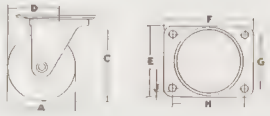
Wheel		Caster Type	Catalogue Numbers		Load Capacity Each (lbs.)
Dia.	Tread Width		Plain Bearing	Roller Bearing	
6″	1½″	Swivel	4331-CW	4331-2CW	500
		Rigid	4381-CW	4381-2CW	500
4″	2″	Swivel	63318CW	6331-2CW	750
		Rigid	6381-CW	6381-CW2	750

"BASSICK" MEDIUM DUTY TRUCK CASTERS

SERIES "61" BALL BEARING SWIVEL TRUCK CASTERS

MATCHED HEIGHT RIGID CASTERS SERIES 38

Wheel			Catalogue Number		Load Capacity Each (lbs.)	Overall Height C	Swivel Radius D	Top Plate		
Dia. A	Type	Tread Width	Plain Bearing	Oiless Bearing				Size E x F	Bolt Hole Spacing G x H	Bolt Hole Size J
2″	Meehanite	1 1/16″	9611	—	125	2 1/2″	1 25/32″	1 7/8″ x 2 5/8″	3/32″ x 2 1/8″	17/64″
	Baco	1″	—	9616	80					
	Atlasite	1″	—	9619	125					
2 1/2″	Meehanite	1 1/8″	2611	—	200	3 1/4″	2 1/8″	3″ x 4 1/8″	2 3/8″ x 3 3/8″	11/32″
	Baco	1 1/8″	—	2616	100					
	Atlasite	1 1/8″	—	2619	200					
3″	Meehanite	1 1/4″	3611	—	250	3 3/4″	2 13/32″	3 1/8″ x 4″	2 3/8″ x 3 1/2″	11/32″
	Baco	1 5/16″	—	3616	125					
	Atlasite	1 5/16″	—	3619	225					



2 1/2″ and 3″ Casters available with Thread Guards at extra cost. Prefix Caster Number with letters T.G.

"BASSICK" MEDIUM DUTY TRUCK CASTERS

SERIES "33" ROLLER BEARING SWIVEL TRUCK CASTERS

MATCHED HEIGHT RIGID CASTERS SERIES 38

Wheel			Catalogue Number			Load Capacity Each (lbs.)	Overall Height C	Swivel Radius B	Top Plate		
Diam. A	Type	Tread Width	Plain Bearing	Oiless Bearing	Roller Bearing				Size E & F	Bolt Hole Spacing G x H	Bolt Hole Size J
4″	Meehanite	1 1/2″	4331	—	4331-2	500	5 1/4″	3 3/16″	4″ x 5″	3″ x 4″	13/32″
	Baco	1 5/8″	—	4336	4336-2	225					
	Atlasite	1 5/8″	—	4339	4339-2	450					
5″	Meehanite	1 5/8″	5331	—		650	6 1/4″	4 1/16″	6″ x 6 1/2″	4 1/8″ x 5 1/2″	15/32″
	Baco	2″	—	5336		325					
	Atlasite	2″	—	5339		550					
6″	Meehanite	2″	6331	—	6331-2	750	7 3/4″	4 9/16″	6″ x 6 1/2″	4 1/8″ x 5 1/2″	15/32″
	Baco	2″	—	6336	6336-2	400					
	Atlasite	2″	—	6339	6339-2	650					

Thread Guards available on all sizes at extra cost. Prefix Caster Number with letters T.G.

"BASSICK" MEDIUM DUTY TRUCK CASTERS

SERIES "38" RIGID TRUCK CASTERS

The 2 1/2″ and 3″ sizes are suitable for use with the 2 1/2″ and 3″ Series "61" and the 4″, 5″ and 6″ are "matched height" with the Series "33" Swivel Casters.

Wheel			Catalogue Number			Matching Series	Load Capacity Each (lbs.)	Overall Height C	Top Plate		
Dia. A	Type	Tread Width	Plain Bearing	Oiless Bearing	Roller Bearing				Size E x F	Bolt Hole Spacing G x H	Bolt Hole Size J
2 1/2″	Meehanite	1 1/8″	2381	—	—	61	200	3 1/4″	2 1/4″ x 4 1/2″	1 1/16″ x 3 15/32″	11/32″
	Baco	1 1/8″	—	2386	—	61	100				
	Atlasite	1 1/8″	—	2389	—	61	200				
3″	Meehanite	1 1/4″	3381	—	—	61	250	3 11/16″	2 1/2″ x 5″	1 3/16″ x 4″	11/32″
	Baco	1 5/16″	—	3386	—	61	125				
	Atlasite''	1 5/16″	—	3289	—	61	225				
4″	Meehanite	1 1/2″	4381	—	4381-2	33	500	5 1/4″	3 1/4″ x 6 5/32″	2″ x 5″	25/64″
	Baco	1 5/8″	—	4386	4386-2	33	225				
	Atlasite	1 5/8″	—	4386	4389-2	33	450				
5″	Meehanite	1 5/8″	5381	—		33	650	6 1/4″	3 3/4″ x 6 1/8″	2 1/2″ x 5″	25/64″
	Baco	2″	—	5386		33	325				
	Atlasite	2″	—	5389		33	550				
6″	Meehanite	2″	6381	—	6381-2	33	750	7 3/4″	3 3/4″ x 6 1/8″	2 1/2″ x 5″	25/64″
	Baco	2″	—	6386	6386-2	33	400				
	Atlasite	2″	—	6389	6389-2	33	650				

Thread Guards available on all sizes. Prefix Caster Number with letters T.G.

"BASSICK" TRUCK CASTER WHEELS

CAST "MEEHANITE" WHEEL

IRON CORE WHEEL

STEEL DISC — DEMOUNTABLE TYRE

"BACO" WHEEL

"ATLASITE" WHEEL

CAST MEEHANITE

Wheel		Load Capac. Each (lbs.)	Hub Length	Bore	Axle Dia. when used with Span. Bushing	Catalogue No.		Used in Caster Series Number
Diam.	Tread Width					Plain Bearing	Roller Bearing	
2″	1 1/16″	125	1 1/8″	1/4″		M2	—	61
2 1/2″	1 1/8″	200	1 1/16″	7/16″	1/4″	M212		36 37 38 61
3″	1 1/4″	350	1 9/16″	1/2″	5/16″	M3	–	36 37 38 61
4″	1 1/2″	500	1 5/8″	9/16″	3/8″	M4	MR4	33 36 37 38
4″	1 1/2″	500	1 5/8″	9/16″	3/8″	MG4	MGR4	33 38 Grooved
5″	1 5/8″	650	2 1/8″	3/4″	1/2″	M5	–	33 36 37 38
6″	2″	750	2 1/8″	3/4″	1/2″	M6	MR6	33 36 37 38 BS, BT
6″	2″	750	2 1/8″	3/4″	1/2″	MG6	MGR6	33 38 Grooved
8″	2″	750	2 1/8″	3/4″	1/2″		MR8	BS, BT

STEEL DISC — REMOUNTABLE TYRE WHEELS

A bolted steel disc wheel with rubber tyre.

Wheel		Capac. Each lbs.	Hub Length	Bore	Axle Diam.	Catalogue No.		Used in Caster Number
Diam.	Tread Width					Ball Bearing	Re-place. Tyres	
6″	1 13/16″	500	2 3/8″	1/4″	1/2″	D6	DT6	BS, BT
8″	1 13/16″	500	2 3/8″	1/4″	1/2″	D8	DT8	BS, BT

HEAVY DUTY — CAST "MEEHANITE" WHEELS

Wheel		Load Capac. Each lbs.	Hub Length	Bore	Axle Diam.	Catalogue No.		Used in Caster Series Number
Diam.	Tread Width					Hyatt Bearing	Sealed Bearing	
6″	2 1/2″	2500	2 3/4″	1″	1/4″	MWR6	MWS6	CS, CT
8″	2 1/2″	2500	2 3/4″	1″	1/4″	MWR8	MWS8	CS, CT
8″	3″	2500	3 1/4″	1″	1/4″	MEWR8	–	TT, TS
10″	3″	2500	3 1/4″	1″	1/4″	MR10	–	TT, TS

IRON CORE WHEELS WITH SOFT RUBBER TREAD

These wheels have soft rubber treads on to the iron core.

Wheel		Load Capac. Each lbs.	Hub Length	Bore	Axle Diam.	Catalogue No.		Used in Caster Series Number
Diam.	Tread Width					Hyatt Bearing	Sealed Bearing	
6″	2 1/2″	530	2 3/4″	1″	1/4″	BWR6	BWS6	CS, CT
8″	2 1/2″	670	2 3/4″	1″	1/4″	BWR8	BWS8	CS, CT
10″	3″	1000	3 1/4″	1″	1/4″	BR10	—	TT, TS
12″	3″	1140	3 1/4″	1″	1/4″	BR12	—	TT, TS

"BACO" RESILIENT — RUBBER TREAD WHEELS
"ATLASITE" — HARD TREAD WHEELS

Wheel		Load Capacity Each (lbs.)		Hub Length	Bore	Axle Diam. when used with Spanner Bushing	Catalogue No.				Used in Caster Series Number
							Baco		Atlasitc		
Diam.	Tread Width	Baco	Atlasite				Oiless Bearing	Roller Bearing	Oiless Bearing	Roller Bearing	
2″	1″	80	125	1 5/32″	1/4″	—	B2	—	A2	—	61
2 1/2″	1 1/8″	100	200	1 5/16″	7/16″	1/4″	B212	—	A212	—	36 37 38 61
3″	1 1/4″	175	225	1 7/16″	—	5/16″	EBW3	†EBWR3	—	—	RS, RT
	1 5/16″	125	250	1 9/16″	1/2″	5/16″	B3	—	A3	—	36 37 38 61
4″	1 1/4″	175	225	1 7/16″	—	5/16″	EBW4	†EBWR4	—	—	RS, RT
	1 5/8″	225	450	1 7/8″	9/16″	3/8″	B4	BR4	A4	AR4	33 36 37 38
5″	1 1/4″	175	225	1 7/16″	—	5/16″	EBW5	†EBWR5	—	—	RS, RT
	2″	325	550	2 3/8″	3/4″	1/2″	B5	—	A5	—	33 36 37 38
6″	2″	350	650	2 3/8″	3/4″	1/2″	B6	BR6	A6	AR6	33 36 37 38 BS, BT
8″	2″	475	650	2 3/8″	3/4″	1/2″	—	BR8	—	AR8	BS, BT

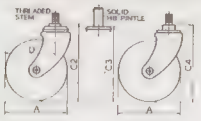
NOTE — † denotes ball bearing. Spanner bushings are provided on all wheels of over 2″ diameter.

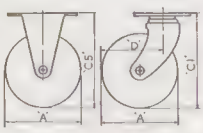
"BASSICK" HEAVY DUTY EQUIPMENT CASTERS

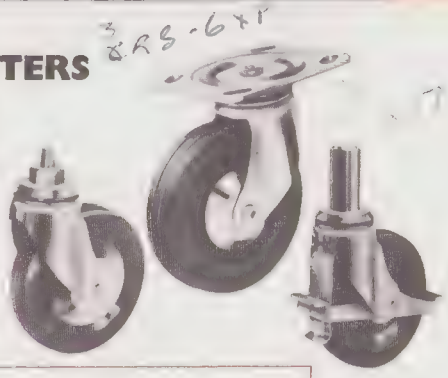
OR LIGHT DUTY TRUCK CASTERS

SERIES "RS" SEALED

"DIAMOND ARROW" CASTERS WITH 3", 4" AND 5" RUBBER TREAD WHEELS







Diam. 'A'	Tread Width 'B'	Overall Height 'C1'	'C2'	'C3'	'C4'	'C5'	Swivel Radius 'D'	Suggested Max. Load Per Set
3	1 1/8	3 3/16	3 1/2	3 1/16	3 1/2	3 1/2	2 3/4	500 lbs.
4	1 1/4	5 5/16	5 3/16	4 1/2	5 3/16	4 1/2	3 5/16	500 lbs.
5	1 1/8	6 1/4	6 3/16	5 1/2	6 3/16	6 1/4	3 1/2	600 lbs.

THREADED STEMS

Fastening				Caster Catalogue Number					
Stem Number	Length		Thread	Ball Bearing Wheel			Oiless Bearing Wheel		
	Overall	Thread		3	4	5	3	4	5
x100	1 1/8	3/4	1/2 N.F.	TG3RS6-2Bx100	TG4RS6-2Bx100	TG5RS6-2Bx100	TG3RS6x100	TG4RS6x100	TG5RS6x100
	*			125	125	150	125	125	150

SOLID STEMS

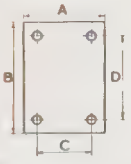
Fastening				Caster Catalogue Number					
Stem Number	Length	I.D. Tubing Nominal	I.D. Tubing Exact	Ball Bearing Wheel			Oiless Bearing Wheel		
				3	4	5	3	4	5
HB-750	2 1/2	3/4	.750	TG3RS6 2BxHB750	TG4RS6-2BxHB750	TG5RS6-2BxHB750	TG3RS6xHB750	TG4RS6xHB750	TG5RS6xHB750
HB-760	2 1/2	3/4	.760	TG3RS6-2BxHB760	TG4RS6-2BxHB760	TG5RS6-2BxHB760	TG3RS6xHB760	TG4RS6xHB760	TG5RS6xHB760
HB-1/2	2 1/2	1/2	.812	TG3RS6-2BxHB1/2	TG4RS6-2BxHB1/2	TG5RS6 2BxHB1/2	TG3RS6xHB1/2	TG4RS6xHB1/2	TG5RS6xHB1/2
HB-1 1/16	2 1/2	1 1/16	1.072	TG3RS6 2BxHB 1 1/16	TG4RS6-2BxHB 1 1/16	TG5RS6-2BxHB 1 1/16	TG3RS6xHB 1 1/16	TG4RS6xHB 1 1/16	TG5RS6xHB 1 1/16
	*			125	125	150	125	125	150

EXPANDING RUBBER ADAPTORS

Fastening		Caster Catalogue Number					
Stem Number	I.D. Tubing Dimensions	Ball Bearing Wheel			Oiless Bearing Wheel		
		3	4	5	3	4	5
EZ-3	7/8-1 1/2	TG3RS6-2BxEZ3	TG4RS6-2BxEZ3	TG5RS6-2BxEZ3	TG3RS6xEZ3	TG4RS6xEZ3	TG5RS6xEZ3
EZ-5	1 7/16-1 7/32	TG3RS6-2BxEZ5	TG4RS6-2BxEZ5	TG5RS6-2BxEZ5	TG3RS6xEZ5	TG4RS6xEZ5	TG5RS6xEZ5
*		125	125	150	125	125	150

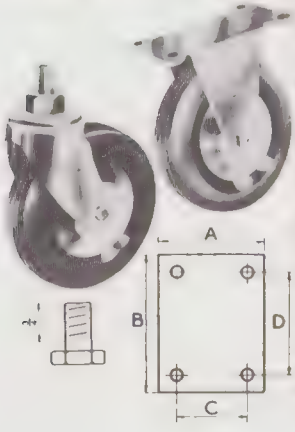
TOP PLATES

Fastening					Caster Catalogue Number					
A	B	C	D	Bolt	Ball Bearing Wheel			Oiless Bearing Wheel		
					3	4	5	3	4	5
2 1/2 3	3 1/2 4 1/8	1 1/2 2 1/8	2 5/8 3 3/8	5/16 5/16	TG3RS6-2BxP	TG4RS6-2BxP	TG5RS6-2BxP	TG3RS6xP	TG4RS6xP	TG5RS6xP
*					125	125	150	125	125	150



SERIES "RT" AND "RR"

NOTE: Although not standard, Series "RR" Casters can be supplied with fixed "H.B" Pintles.



Fastening					Caster Catalogue Number					
A	B	C	D	Bolt	Ball Bearing Wheel			Oiless Bearing Wheel		
					3	4	5	3	4	5
2 1/2	4 1/8	1 1/2	3 3/8	5/16	TG3RT6-2B	TG4RT6-2B	TG5RT6-2B	TG3RT6	TG4RT6	TG5RT6
2 1/2	4 1/8	1 1/2	3 3/8	5/16						
2 1/2	4 1/8	1 1/4	4 1/8	5/16						

Stem No.	Length Ovl.	Length Trd	Thread	Ball Bearing Wheel 3	4	5	Oiless Bearing Wheel 3	4	5
x100	1 1/8	3/4	1/2 N.F.	TG3RR6-2Bx100	TG4RR6-2Bx100	TG5RR6-2Bx100	TG3RR6-x100	TG4RR6x100	TG5RR6x100
*				125	125	150	125	125	150

*SUGGESTED MAXIMUM LBS. LOAD CAPACITY PER CASTER.

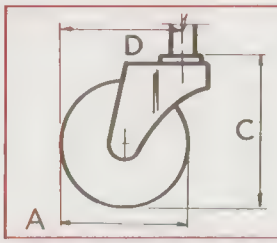
ANTI-STATIC WHEELS: When required, suffix Caster Catalogue Number with words "Anti-Static".

BRAKES: Two-way brakes are available on 4" and 5" casters. When ordering, prefix Caster Catalogue Number with letter "B"; "B"TG4RS6-2BX100.

REPLACEMENT WHEELS CASTER CATALOGUE NUMBER

Ball Bearing Wheel			Oiless Bearing Wheel		
3	4	5	3	4	5
WB60013	WB60014	WB60015	WD60033	WD60034	WD60035

"BASSICK" SERIES "69" MEDIUM DUTY CASTERS

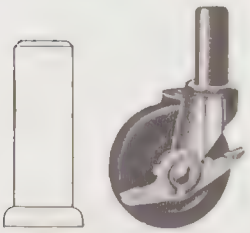


SERIES "69" DATA

A	B	C	D
3	1 3/16	3 1/2	2 1/2
4	3 1/32	4 3/4	3 1/4

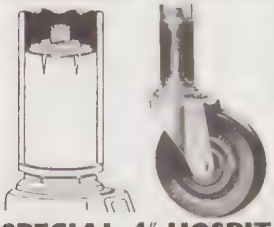
TREAD WIDTH — B

CASTERS WITH 2 1/2" LONG SOLID PINTLES



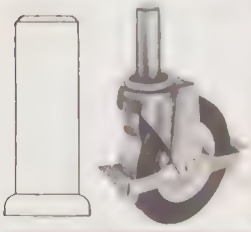
Tubing I.D. Nominal	Tubing I.D. Exact	Pintle Number	Baco Soft Rubber Tread Wheels — Oiless Bearing 3"	Oiless Bearing 4"	Ball Bearing 4"	Finish
3/4"	.750	HB-750	13696 XHB750	14696 XHB750	14696-2B XHB750	Bright Zinc Plated or Bright Chrome Plated
	.760	HB-760	13696 XHB760	14696 XHB760	14696-2B XHB760	
13/16"	.812	HB-13/16	13696 XHB13/16	14696 XHB13/16	14696-2B XHB13/16	
1 1/16"	1.072	HB-1 1/16	13696 XHB1 1/16	14696 XHB1 1/16	14696-2B XHB1 1/16	

CASTERS WITH EZ RUBBER ADAPTORS



Nominal Size of Tube: Outside Diam. and Gauge	Expansion Range of Adaptor	Adaptor No.	Baco Soft Rubber Tread Wheels — Oiless Bearing 3"	Oiless Bearing 4"	Ball Bearing 4"	Standard Finishes
3/4" x 16, 17, 18, 20	.620- .695	EZ-2	13696 XEZ-2	14696 XEZ-2	14696-2B XEZ-2	Bright Zinc Plated or Bright Chrome Plated
7/8" x 16, 17, 18, 20	.730- .805	EZ-2 1/2	13696 XEZ-2 1/2	14696 XEZ-2 1/2	14696-2B XEZ-2 1/2	
1" x 16, 17, 18, 20	.843- .930	EZ-3	13696 XEZ-3	14696 XEZ-3	14696-2B XEZ-3	
1 1/4" x 16, 17, 18	1.115-1.193	EZ-5	13696 XEZ-5	14696 XEZ-5	14696-2B XEZ-5	

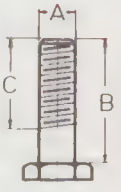
SPECIAL 4" HOSPITAL CASTERS



Wheel Dia.	Type	Casters with Brake — Oiless Bearing Wheel	Casters with Brake — Ball Bearing Wheel	Casters without Brake — Oiless Bearing Wheel	Casters without Brake — Ball Bearing Wheel	Pintle Data	Standard Finish
4"	"Baco" Rubber Non-marking	BTG14696	BTG14696-2	TG14696	TG14696-2	Available with any size "HB or "EZ" fastening detailed above. State size and type.	Polished Chrome Plate
	"Baco" Rubber Anti-static	BTG14696T	BTG14696T-2	TG14696T	TG14696T-2		

LIGHT DUTY CASTERS WITH THREADED PINTLES

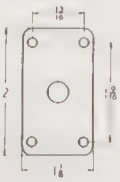
SERIES "69" DIAMOND ARROW



Wheel Diam.	Diam. and Thread "A"	Overall Length "B"	Threaded Length "C"	Plain Bearing Plastic Wheel	Oiless Bearing Baco Rubber Wheel	Finish
1 5/8"	3/8" N.F.	1 1/2"	1 1/4"	7698P X58	7696 X58	Bright Zinc Plated
	3/8" N.F.	1"	1"	7698P X60	7696 X60	
	3/8" Whit.	1 1/2"	1 1/4"	7698P X8	7696 X8	
	3/8" Whit.	1"	1"	7698P X10	7696 X10	
2"	3/8" N.F.	1 1/2"	1 1/4"	9698P X58	9696 X58	
	3/8" N.F.	1"	1"	9698P X60	9696 X60	
	3/8" Whit.	1 1/2"	1 1/4"	9698P X8	9696 X8	
	3/8" Whit.	1"	1"	9698P X10	9696 X10	
3"	3/8" N.F.	1 1/2"	1 1/4"	13698P X58	13696 X58	
	3/8" N.F.	1"	1"	13698P X60	13696 X60	
	3/8" Whit.	1 1/2"	1 1/4"	13698P X8	13696 X8	
	3/8" Whit.	1"	1"	13698P X10	13696 X10	

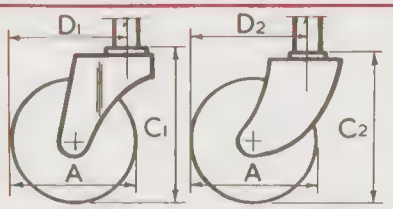
LIGHT DUTY PLATE CASTERS

SERIES "69" DIAMOND ARROW



Wheel Diam.	Plain Bearing Plastic Wheel	Oiless Bearing Baco Rubber Wheel	Finish
1 5/8"	7698P XP	7696 XP	Oxidised Copper or Bright Zinc Plated
2"	9698P XP	9696 XP	
3"	13698P XP	13696 XP	

"BASSICK" SERIES "49" AND "69" LIGHT DUTY CASTERS



SERIES "49" SERIES "69"

DATA

A	B	C_1	C_2	D_1	D_2
$1\frac{5}{8}$	$\frac{3}{4}$	$2\frac{1}{8}$	2	$1\frac{9}{16}$	$1\frac{5}{16}$
2	$\frac{13}{16}$	$2\frac{1}{2}$	$2\frac{5}{8}$	$1\frac{7}{8}$	$1\frac{3}{4}$
3	$\frac{13}{16}$	$3\frac{1}{2}$	$3\frac{3}{8}$	$2\frac{1}{2}$	$2\frac{1}{2}$

Tread Width — B For wheel details see page 208

Wheel Diam.	Series "49" Top Bearing Swivel Pintle Casters		Series "69" Ball Bearing Swivel Casters		Finish
	Plain Bearing Plastic Wheel	Oiless Bearing Baco Rubber Wheel	Plain Bearing Plastic Wheel	Oiless Bearing Baco Rubber Wheel	
$1\frac{5}{8}$"	7498P X3	7496 X3	7698P X3	7696 X3	Bright Zinc Plated
2"	9498P X3	9496 X3	9698P X3	9696 X3	
3"	13498P X3	13496 X3	13698P X3	13696 X3	

Ball Bearing Swivel Caster Series "69" with X3 Plain Pintle $\frac{7}{16}$" diam.

Size of Tube	Use Socket Number								
	60	65	70	75	80	85	90	105	18
Nominal O.D. Gauge	$\frac{3}{4}$" 18-20	$\frac{3}{4}$" 16-17	$\frac{7}{8}$" 18-20	$\frac{7}{8}$" 16-17	1" 17-20	1" 14-16	$1\frac{1}{8}$" 16-18	$1\frac{1}{4}$" 16-18	For Wood Bore $\frac{9}{16}$" Hole

"Grip Ring" Socket

Wheel Diam.	Series "49" Top Bearing Swivel Pintle Casters		Series "69" Ball Bearing Swivel Casters		Finish
	Plain Bearing Plastic Wheel	Oiless Bearing Baco Rubber Wheel	Plain Bearing Plastic Wheel	Oiless Bearing Baco Rubber Wheel	
$1\frac{5}{8}$"	7498P X2	7496 X2	7698P X2	7696 X2	Bright Zinc Plated
2"	9498P X2	9496 X2	9698P X2	9696 X2	
3"	13498P X2	13496 X2	13698P X2	13696 X2	

Top Bearing Swivel Caster Series "49" with X2 "Grip Ring" Pintle $\frac{7}{16}$" diam.

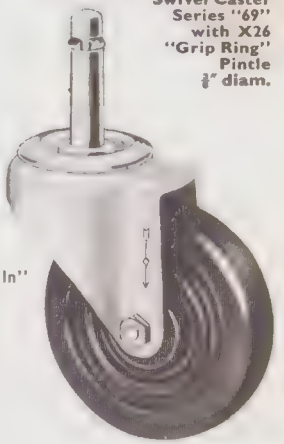
Size of Tube	Use Socket Number				
	20	2542	2543	28	32PW
Nominal O.D.	$\frac{11}{16}$"	1"	$1\frac{1}{16}$"	For Wood Bore $\frac{9}{16}$" Hole	For Projection Welding Flat Back
Exact I.D.....	.562	.844	.894		

Tubular Socket

Projection Welded Socket

Wheel Diam.	Series "49" Top Bearing Swivel Pintle Casters		Series "69" Ball Bearing Swivel Casters		Finish
	Plain Bearing Plastic Wheel	Oiless Bearing Baco Rubber Wheel	Plain Bearing Plastic Wheel	Oiless Bearing Baco Rubber Wheel	
$1\frac{5}{8}$"	7498P X26	7496 X26	7698P X26	7696 X26	Bright Zinc Plated
2"	9498P X26	9496 X26	9698P X26	9696 X26	
3"	13498P X26	13496 X26	13698P X26	13696 X26	

Ball Bearing Swivel Caster Series "69" with X26 "Grip Ring" Pintle $\frac{3}{4}$" diam.



Size of Tube	Gauges	Use Socket Number	Colour
$\frac{3}{4}$" O.D.	17, 18, 20	P750/8	Gilt
$\frac{7}{8}$" O.D.	17, 18, 20	P875/8	
1" O.D.	14 to 20	P100/8	
$\frac{3}{4}$" Pipe	.854 I.D.	P100/8	

"Drive In" Plastic Socket

Side brakes available on Series "69" casters with 3" Baco rubber tread wheels. Prefix caster catalogue number with letters "S.B.", viz., S.B13696X3.

Thread guards can be supplied with 3" Baco rubber tread wheels. Series "49" and "69" casters — Prefix Caster Catalogue Number with letters "T.G", viz., T.G13696X3.

EQUIPMENT CASTER REPLACEMENT WHEELS

OILESS BEARING "BACO" TREAD WHEELS

Caster Catalogue Number	Pintle or Top Plate Identification	Replacement Wheel Number	Diam.	Tread Width	Hub Length	Axle Diam.
7496	X2, X3, X26	EB158	1 5/8"	23/32"	25/32"	7/32"
9496	X2, X3, X26	EB2	2"	1"	15/16"	1/4"
13496	X2, X3, X26	EB3	3"	3/4"	15/16"	1/4"
7696	X2, X3, X8, X10, X26, X58, X60, XP	EB158	1 5/8"	23/32"	25/32"	7/32"
9696	X2, X3, X8, X10, X26, X68, X60, XP	EB2	2"	3/4"	15/16"	1/4"
13696	X2, X3, X8, X10, X26, X58, X60, XP, XEZ, XHB	EB3	3"	3/4"	15/16"	1/4"
TG13696	X2, X3, X8, X10, X26, X58, X60,*XEZ, XHB, XP	*EBT3	3"	3/4"	15/16"	1/4"
SB13696	X2, X3, X8, X10, X26, X58, X60,*XEZ, XHB, XP	EB3	3"	3/4"	15/16"	1/4"
14696	XEZ, XHB	EB4	4"	31/32"	1 5/32"	5/16"
TG14696	XHB, XEZ	*EBT4	4"	31/32"	1 5/32"	5/16"
TG14696T	XHB, XEZ	*EBT4	4"	31/32"	1 5/32"	5/16"
SB14696	XHB, XEZ	EB4	4"	31/32"	1 5/32"	5/16"
BTG14696	XHB, XEZ	*EBT4	4"	31/32"	1 5/32"	5/16"
BTG14696T	XHB, XEZ	*EBT4	4"	31/32"	1 5/32"	5/16"
TG3RS6	X100, XHB, XEZ, XP	*EBW3	3"	1 1/4"	1 7/16"	5/16"
TG4RS6	X100, XHB, XEZ, XP	*EBW4	4"	1 1/4"	1 7/16"	5/16"
TG5RS6	X100, XHB, XEZ, XP	*EBW5	5"	1 1/4"	1 7/16"	5/16"
TG3RT6		*EBW3	3"	1 1/4"	1 7/16"	5/16"
TG4RT6		*EBW4	4"	1 1/4"	1 7/16"	5/16"
TG5RT6		*EBW5	5"	1 1/4"	1 7/16"	5/16"
TG3RR6	X100, XHB	*EBW3	3"	1 1/4"	1 7/16"	5/16"
TG4RR6	X100, XHB	*EBW4	4"	1 1/4"	1 7/16"	5/16"
TG5RR6	X100, XHB	*EBW5	5"	1 1/4"	1 7/16"	5/16"

* Wheels fitted with Spanner Bushing.

BALL BEARING "BACO" TREAD WHEELS

Caster Catalogue Number	Pintle or Top Plate Identification	Replacement Wheel Number	Diam.	Tread Width	Hub Length	Axle Diam.
14696-2B	XHB, XEZ	EBR4	4"	31/32"	1 5/32"	5/16"
TG14696-2B	XHB, XEZ	EBR4	4"	31/32"	1 5/32"	5/16"
TG14696T-2B	XHB, XEZ	*EBR4	4"	31/32"	1 5/32"	5/16"
SB14696-2B	XHB, XEZ	EBR4	4"	31/32"	1 5/32"	5/16"
BTG14696-2B	XHB, XEZ	EBR4	4"	31/32"	1 5/32"	5/16"
BTG14696T-2B	XHB, XEZ	*EBR4	4"	31/32"	1 5/32"	5/16"
TG3RS6-2B	X100, XHB, XEZ, XP	EBWR3	3"	1 1/4"	1 7/16"	5/16"
TG4RS6-2B	X100, XHB, XEZ, XP	EBWR4	4"	1 1/4"	1 7/16"	5/16"
TG5RS6-2B	X100, XHB, XEZ, XP	EBWR5	5"	1 1/4"	1 7/16"	5/16"
TG3RT6-2B		EBWR3	3"	1 1/4"	1 7/16"	5/16"
TG4RT6-2B		EBWR4	4"	1 1/4"	1 7/16"	5/16"
TG5RT6-2B		EBWR5	5"	1 1/4"	1 7/16"	5/16"
TG3RR6-2B	X100, XHB	EBWR3	3"	1 1/4"	1 7/16"	5/16"
TG4RR6-2B	X100, XHB	EBWR4	4"	1 1/4"	1 7/16"	5/16"
TG5RR6-2B	X100, XHB	EBWR5	5"	1 1/4"	1 7/16"	5/16"

* Anti-Static Wheels.

"PLASTIC" PHENOLIC RESIN WHEELS

Caster Catalogue Number	Pintle or Top Plate Identification	Replacement Wheel Number	Diam.	Tread Width	Hub Length	Axle Diam.
7498P	X2, X3, X26	P158	1 5/8"	23/32"	25/32"	7/32"
9498P	X2, X3, X26	P2	2"	3/4"	15/16"	1/4"
13498P	X2, X3, X26	P3	3"	3/4"	15/16"	1/4"
7698P	X2, X3, X8, X10, X26, X58, X60, XP	P158	1 5/8"	23/32"	25/32"	7/32"
9698P	X2, X3, X8, X10, X26, X58, X60, XP	P2	2"	3/4"	15/16"	1/4"
13698P	X2, X3, X8, X10, X26, X58, X60, XP	P3	3"	3/4"	15/16"	1/4"

"SHEPHERD" CASTERS FOR SMOOTH, SILENT MOBILITY

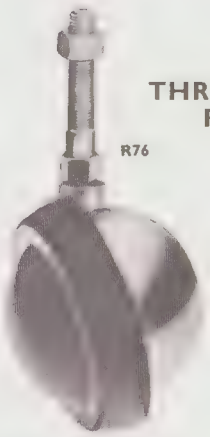
HEAVY DUTY METAL TREAD

M200

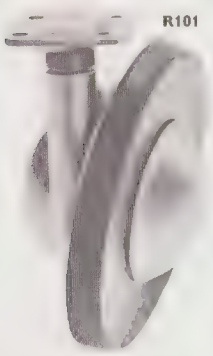
M201

M205

THREADED PINTLE

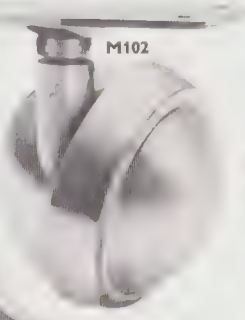

R76

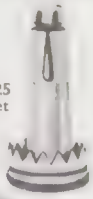
MEDIUM DUTY RUBBER TREAD

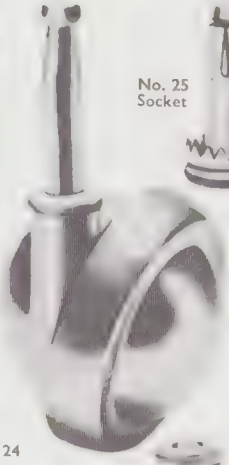

R101

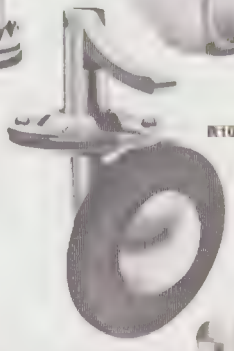
R102

LONG CORNER PLATE MOUNTING


M102


No. 25 Socket




R103B

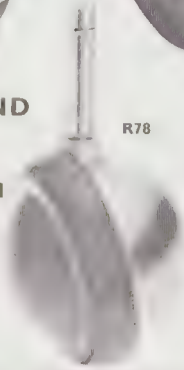
COACH SCREW PINTLE
with washer

R440

PINTLES AND SOCKETS

FOR TIMBER APPLICATION

(Castors supplied complete with Sockets)


R78

N60

Socket No. 24

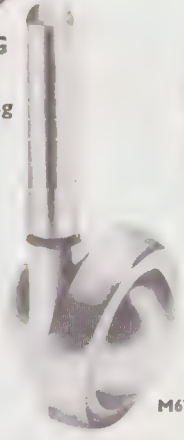
$^{7}/_{16}$" FRICTION RING PINTLE

for Metal Application

EXPANDING FITTING

For Metal Tubing Fits O.D. Tube $\frac{3}{4}$", $\frac{7}{8}$", 1" and $1\frac{1}{4}$" (16g - 20g)

R79


M67

PLAIN PINTLE

For welding or use with Shepherd Sockets.

SHEPHERD SOCKETS FOR METAL TUBING

Size of Tubing		Socket Numbers	
Outside Diam. Nominal	Gauge	Gripring Sockets for Plain Pintle	Tub. Sockets for Friction Ring Pintle
$\frac{3}{4}$"	18–20	60	20
$\frac{3}{4}$"	16–17	65	—
$\frac{7}{8}$"	18–20	70	—
$\frac{7}{8}$"	16–17	75	—
1"	17–20	80	—
1"	14–16	85	242
$1\frac{1}{8}$"	16–18	90	243
$1\frac{1}{4}$"	16–18	105	—
$1\frac{5}{16}$"	13	45	—
Sockets for wood furniture $\frac{9}{16}$" hole		18	22(M68.R58.R48) 24(M108.R78) (25 GRIPNECK)

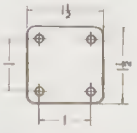
Plastic Sockets for $\frac{3}{4}$", $\frac{7}{8}$" and 1" Tube P750, P875 and P100 with /8 or /0 to suit No. 8 or No. 0 Pintle.

METAL CASTERS FOR CARPET RUBBER CASTERS FOR HARD FLOORS

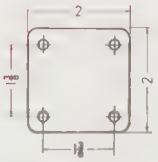
Heavy Duty Metal Tread Casters are finished in Silver-Grey enamel. All other Shepherd Casters available in Plated Finishes of Bronze, Satin Nickel or Brass.

PLATE FASTENINGS

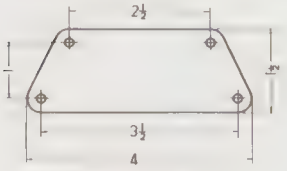
STEEL PLATE
Holes c/sk for No. 8 screws. Used on Casters M101, R71, R101



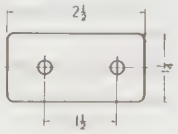
STEEL PLATE
Holes c/sk for No. 5 screws. Used on Casters M61, R51, R41



DIE CAST PLATE
Holes ¼″ dia. Used on Caster M201, R151



STEEL PLATE
Holes c/sk for No. 8 screws on Casters M102, R72, R102



DIE CAST PLATE
Holes $\frac{7}{16}$″ dia. Used on Caster M200, R150

Catalogue Number	Wheel Diam.	Type of Tread	Load Rating Per Caster	Fastening Dimensions
R41	2¼″	Rubber	40 lbs.	1¼″ Square Plate
R51	2¼″	Rubber	50 lbs.	1¼″ Square Plate
M61	2″	Metal	60 lbs.	1¼″ Square Plate
R71	2¾″	Rubber	70 lbs.	1½″ Square Plate
M101	2½″	Metal	100 lbs.	1½″ Square Plate
R101	4″	Rubber	100 lbs.	1½″ Square Plate
M200 (Rigid)	3¼″	Metal	200 lbs.	2½″ x 1¼″
M201	3¼″	Metal	200 lbs.	2″ Square Plate
R72	2¾″	Rubber	70 lbs.	4″ x 1½″ Corner Plate
R102	4″	Rubber	100 lbs.	4″ x 1½″ Corner Plate
M102	2½″	Metal	100 lbs.	4″ x 1½″ Corner Plate
R150 (Rigid)	3¾″	Rubber	150 lbs.	2½″ x 1¼″
R151	3¾″	Rubber	150 lbs.	2″ Square Plate

THREADED PINTLE FASTENINGS

LONG STUD
(with nut)
1⅞″ x ⅜″ N.F. Used on Casters M66, M106, R46, R76, R106

SHORT STUD
(with nut)
⅝″ x ⅜″ N.F. Used on Casters M65, R55, R45

SHORT STUD
(with nut)
1″ x ⅜″ N.F. Used on Casters M105, R75

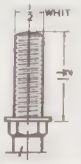
SHORT STUD
(with nut)
1″ x ½″ N.F. Used on Casters M205, R105, R155

Catalogue Number	Wheel Diam.	Type of Tread	Load Rating Per Caster	Fastening Dimensions
R45	2¼″	Rubber	40 lbs.	⅝″ x ⅜″ N.F. Stud and Nut
R55	2¼″	Rubber	50 lbs.	⅝″ x ⅜″ N.F. Stud and Nit
M65	2″	Metal	60 lbs.	⅝″ x ⅜″ N.F. Stud and Nut
R75	2¾″	Rubber	70 lbs.	1″ x ⅜″ N.F. Stud and Nut
M105	2½″	Metal	100 lbs.	1″ x ⅜″ N.F. Stud and Nut
R105	4″	Rubber	100 lbs.	1″ x ½″ N.F. Stud and Nut
M205	3¼″	Metal	200 lbs.	1″ x ½″ N.F. Stud and Nut
R46	2¼″	Rubber	40 lbs.	1⅞″ x ⅜″ N.F. Stud and Nut*
R56	2¼″	Rubber	50 lbs.	1⅞″ x ⅜″ N.F. Stud and Nut
M66	2″	Metal	60 lbs.	1⅞″ x ⅜″ N.F. Stud and Nut*
R76	2¾″	Rubber	70 lbs.	1⅞″ x ⅜″ N.F. Stud and Nut*
R106	4″	Rubber	100 lbs.	1 5/16″ x ⅜″ N.F. Stud and Nut*
M106	2½″	Metal	100 lbs.	1⅞″ x ⅜″ N.F. Stud and Nut*
R155	3¾″	Rubber	150 lbs.	1″ x ½″ N.F.S. Stud and Nut

*R46, M66, R76 and M106 threaded 1⅛″. R106 threaded 1″.

COACH SCREW AND WASHER

COACH SCREW
and Washer
1½″ x $\frac{7}{16}$″ Whit. Used on Casters M64, R54, R44



COACH SCREW
and Washer
1½″ x ½″ Whit. Used on Casters M104, R74

COACH SCREW
and Ferrule
1¾″ x ½″ Whit. Used on Caster R104

Catalogue Number	Wheel Diam.	Tpye of Tread	Load Rating Per Castor	Fastening Dimensions
R44	2¼″	Rubber	40 lbs.	1¼″ x ⅜″ Whit. Form
R54	2¼″	Rubber	50 lbs.	1¼″ x ⅜″ Whit. Form
M64	2″	Metal	60 lbs.	1¼″ x ⅜″ Whit. Form
R74	2¾″	Rubber	70 lbs.	1½″ x ½″ Whit. Form
M104	2½″	Metal	100 lbs.	1½″ x ½″ Whit. Form
R104	4″	Rubber	100 lbs.	1¾″ x ½″ Whit. Form

PLAIN PINTLE

FOR WELDING OR USE WITH GRIPRING SOCKETS (No. 18)

PLAIN PINTLE
Suitable for welding or in conjunction with Grip Ring Socketr (No. 18). Used on Casters M67, M107, R47, R57, R77, R107

Catalogue Number	Wheel Diam.	Type of Tread	Load Rating Per Caster	Fastening Dimensions
R47	2¼″	Rubber	40 lbs.	2″ x 7/16″
R57	2¼″	Rubber	50 lbs.	2″ x 7/16″
M67	2″	Metal	60 lbs.	2″ x 7/16″
R77	2¾″	Rubber	70 lbs.	2″ x 7/16″
R107	4″	Rubber	100 lbs.	2″ x 7/16″
M107	2½″	Metal	100 lbs.	2″ x 7/16″

EXPANDING ADAPTORS

(FOR ¾″, ⅞″, 1″, 1¼″ O.D. TUBING, 16 TO 20 GAUGE)

LONG STUD
with Cone Expanding Tube Fitting
Expanding Fittings can be used in conjunction with ALL Long Studs. Fittings suitable for ¾″, ⅞″, 1″ and 1¼″ O.D. Tubing

Catalogue Number	Wheel Diam.	Type of Tread	Load Rating Per Caster
R49	2¼″	Rubber	40 lbs.
M69	2″	Metal	60 lbs.
R79	2¾″	Rubber	70 lbs.
M109	2½″	Metal	100 lbs.
R109	4″	Rubber	100 lbs.

GRIPNECK PINTLE

(FOR USE WITH GRIPNECK SOCKETS (No. 25) IN TIMBER

GRIP NECK PINTLE
for Steel Drip Neck Sockets (No. 25). Used on Casters M60, M100, R40, R50, R70

Catalogue Number	Wheel Diam.	Type of Tread	Load Rating Per Caster	Fastening Dimensions
R40	2¼″	Rubber	40 lbs.	1½″ x 5/16″
R50	2¼″	Rubber	50 lbs.	1½″ x 5/16″
M60	2″	Metal	60 lbs.	1½″ x 5/16″
R70	2¾″	Rubber	70 lbs.	1½″ x 5/16″
M100	2½″	Metal	100 lbs.	1½″ x 5/16″

Silver Plastic Sockets 5/16″ Pintle.

FRICTION RING PINTLE

(FOR USE WITH PLAIN SOCKETS IN TIMBER OR FITTED TO 25/64″ DRILLED HOLE

FRICTION RING PINTLE
for Push-in Socket (No. 24)
Used on Casters
M108, R78

FRICTION RING PINTLE
for Push-in Socket (No. 22)
Used on Casters
M68, R58, R48

Catalogue Number	Wheel Diam.	Type of Tread	Load Rating Per Caster	Fastening Dimensions
R48 (Socket No. 22)	2¼″	Rubber	40 lbs.	1⅛″ x 5/16″
R58 (Socket No. 22)	2¼″	Rubber	50 lbs.	1⅛″ x 5/16″
M68 (Socket No. 22)	2″	Metal	60 lbs.	1⅛″ x 5/16″
R78 (Socket No. 24)	2¾″	Rubber	70 lbs.	1½″ x ⅜″
M108 (Socket No. 24)	2½″	Metal	100 lbs.	1½″ x ⅜″

Black Plastic Socket for ⅜″ Pintle.
Silver Plastic Socket for 5/16″ Pintle.

7/16″ FRICTION RING PINTLE

(FOR USE WITH TUBULAR SOCKETS (No. 28) IN METAL TUBING OR FITTED TO 29/64″ DRILLED HOLE)

7/16″ FRICTION RING PINTLE
for use with Steel Socket (No. 28)· 1⅜″ x 7/16″. Used on Casters M63, M103, R43, R53, R73

Catalogue Number	Wheel Diam.	Type of Tread	Load Rating Per Caster	Fastening Dimensions
R43	2¼″	Rubber	40 lbs.	1⅜″ x 7/16″
R53	2¼″	Rubber	50 lbs.	1⅜″ x 7/16″
M63	2″	Metal	60 lbs.	1⅜″ x 7/16″
R73	2¾″	Rubber	70 lbs.	1⅜″ x 7/16″
M103	2½″	Metal	100 lbs.	1⅜″ x 7/16″

BRAKE FOR WHEEL AND SWIVEL

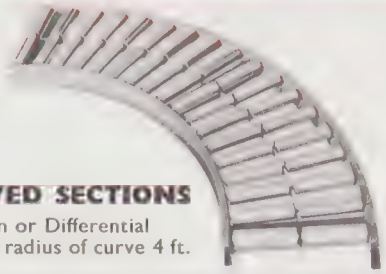
WITH SOLID PINTLE AND FLANGE

R103B	4″	Rubber	100 lbs.	2¼″ x 13/16″

"BRAEMAR" GRAVITY ROLLER CONVEYORS

STRAIGHT SECTIONS

5 ft. or 10 ft. Standard.
Non Standard Lengths can be supplied



CURVED SECTIONS

Plain or Differential
Outside radius of curve 4 ft.

GENERAL DUTY — 100 lb. Capacity Rollers

Rollers — 2″ x 16G Wellington Shielded Bearings
Frame — 3½″ x 1¼″ 10G Channel Multi-pitch, punched 1½″ Centres

Width Overall	Roller Length Over Bearings	Pitch	Catalogue Number 5′	Catalogue Number 10′
12″	9⅜″	3″	B1910-3	B1912-3
12″	9⅜″	4½″	B1910-45	B1923-45
12″	9⅜″	6″	B1910-6	B1912-6
18″	15⅜″	3″	B1914-3	B1916-3
18″	15⅜″	4½″	B1914-45	B1916-45
18″	15⅜″	6″	B1914-16	B1916-6
REPLACEMENT ROLLERS				
—	9⅜″	—	—	—
—	15⅜″	—	—	—

Width Overall	Roller Length Over Bearings	Pitch	Catalogue Number 45°	Catalogue Number 90°
12″	2 of 4¾″	3″	B1952-3	B1946-3
12″	2 of 4¾″	4½″	B1952-45	B1946-45
12″	2 of 4¾″	6″	B1952-6	B1946-6
18″	2 of 7⅞″	3″	B1964-3	B1958-3
18″	2 of 7⅞″	4½″	B1964-45	B1968-45
18″	2 of 7⅞″	6″	B1964-6	B1958-6

LIGHT DUTY — 100 lb. Capacity Rollers

Rollers — 1¾″ x 18G Spindles Elongated .396″ x .306″
Frame — 3⅛″ x 1″ x 12G Channel

12″	9⅞″	3″	7000-5	7200-10
12″	9⅞″	4½″	7020-5	7220-10
12″	9⅞″	6″	7040-5	7240-10
16¼″	14⅛″	3″	7060-5	7260-10
16¼″	14⅛″	4½″	7080-5	7280-10
16¼″	14⅛″	6″	7100-5	7300-10
20¼″	18⅛″	3″	7120-5	7320-10
20¼″	18⅛″	4½″	7140-5	7340-10
20¼″	18⅛″	6″	7160-5	7360-10
REPLACEMENT ROLLERS				
—	—	9⅞″	7005	—
—	—	14⅛″	7063	—
—	—	18⅛″	7123	—

PLAIN CURVES to suit all pitches

12″	9⅞″	—	7912-45S	7912-90S
16¼″	14⅛″	—	7916-45S	7916-90S
20¼″	18⅛″	—	7920-45S	7920-90S

DIFFERENTIAL CURVES to suit all pitches

12″	2 of 4¾″	—	7912-45D	7912-90D
16¼″	2 of 6⅞″	—	7916-45D	7916-90D
20¼″	2 of 8⅞″	—	7920-45D	7920-90D

HEAVY DUTY — 300 lb. Capacity Rollers

Rollers — 2″ x 12G Spindles Elongated .530″ x .410″
Frame — 3⅛″ x 1″ x 10G Channel

12″	9⅞″	3″	7500-5	7700-10
12″	9⅞″	4½″	7520-5	7720-10
12″	9⅞″	6″	7540-5	7740-10
16¼″	14⅛″	3″	7560-5	7760-10
16¼″	14⅛″	4½″	7580-5	7780-10
16¼″	14⅛″	6″	7600-5	7800-10
20¼″	18⅛″	3″	7620-5	7820-10
20¼″	18⅛″	4½″	7640-5	7840-10
20¼″	18⅛″	6″	7660-5	7860-10
REPLACEMENT ROLLERS				
—	9⅞″ long Spring loaded		7505	
—	14⅛″ long Spring loaded		7563	
—	18⅛″ long Spring loaded		7623	

PLAIN CURVES to suit all pitches

12″	9⅞″	—	7942-45	7932-90S
16¼″	14⅛″	—	7946-45	7936-90S
20¼″	18⅛″	—	7950-45	7940-90S

DIFFERENTIAL CURVES to suit all pitches

12″	2 of 4¾″	—	7942-45D	7932-90D
16¼″	2 of 6⅞″	—	7946-45D	7936-90D
20¼″	2 of 8⅞″	—	7950-45D	7940-90D

PAN-TECHNICON — 150 lb. Capacity Rollers

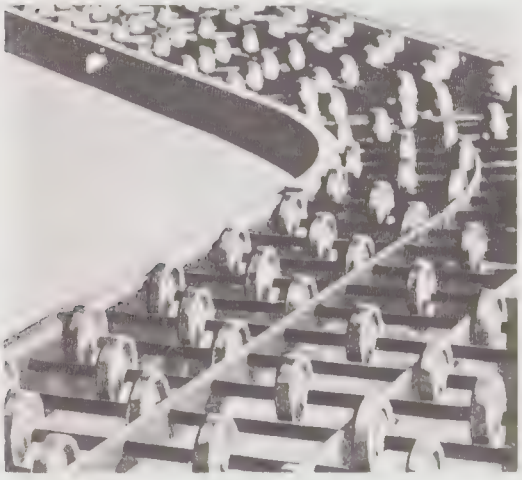
Rollers — 1¾″ x 10G Spindles Elongated .396″ x .306″
Frame — 3⅛″ x 1″ x 12G Channel, 10′ Section Only

8″	6″	3″	—	7201-PT
8″	6″	4½″	—	7202-PT
8″	6″	6″	—	7203-PT

ALSO AVAILABLE TWO WAY FROG, TWO WAY SWITCH AND GUIDE RAILS

"BRAEMAR" WHEELED GRAVITY CONVEYORS

Available in standard lengths of 5 and 10 ft. sections with a choice of 12″ or 18″ widths. Various wheel patterns and pitches to suit all applications. Conveyor sections are light in weight but are strong and rigid.

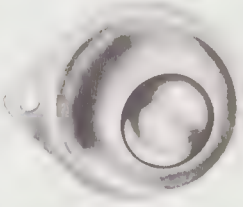


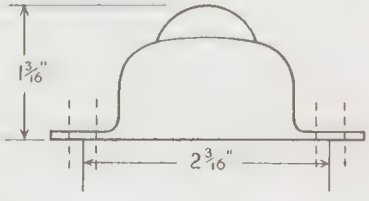
Description	Pitch	Catalogue Number	
		Steel Wheel	Nylon Wheel
STRAIGHT SECTION			
10′ long 3″ pitch single row 2″ Diam. Wheels	—	7960	
10′ long 6″ pitch single row 2″ Diam. Wheels	—	7970	
90° CURVES			
12″ overall x 3 and 2 Pattern	3″	W12453	N12453
12″ overall x 3 and 2 Pattern	6″	W12456	N12456
18″ overall x 4 and 3 Pattern	3″	W18453	N18453
18″ overall x 4 and 3 Pattern	6″	W18456	N18456
45° CURVES			
12″ overall x 3 and 2 Pattern	3″	W12903	N12903
12″ overall x 3 and 2 Pattern	6″	W12906	N12906
18″ overall x 4 and 3 Pattern	3″	W18903	N18903
18″ overall x 4 and 3 Pattern	6″	W18906	N18906
SINGLE WHEEL TRACK CONVEYOR			
10′ x 12″ overall x 3 and 2 Pattern	3″	W12103	N12103
5′ x 12″ overall x 3 and 2 Pattern	3″	W12530	N12530
10′ x 12″ overall x 3 and 2 Pattern	6″	W12106	N12106
5′ x 12″ overall x 3 and 2 Pattern	6″	W12560	N12560
10′ x 18″ overall x 4 and 3 Pattern	3″	W18103	N18103
5′ x 18″ overall x 4 and 3 Pattern	3″	W18530	N18530
10′ x 18″ overall x 4 and 3 Pattern	6″	W18106	N18106
5′ x 18″ overall x 4 and 3 Pattern	6″	W18560	N18560

Replacement wheels, Steel V3206A, Nylon NV3206A

B101 BALL TRANSFER

Available as a Single Unit or made up in a Transfer Table 100 lbs. Capacity

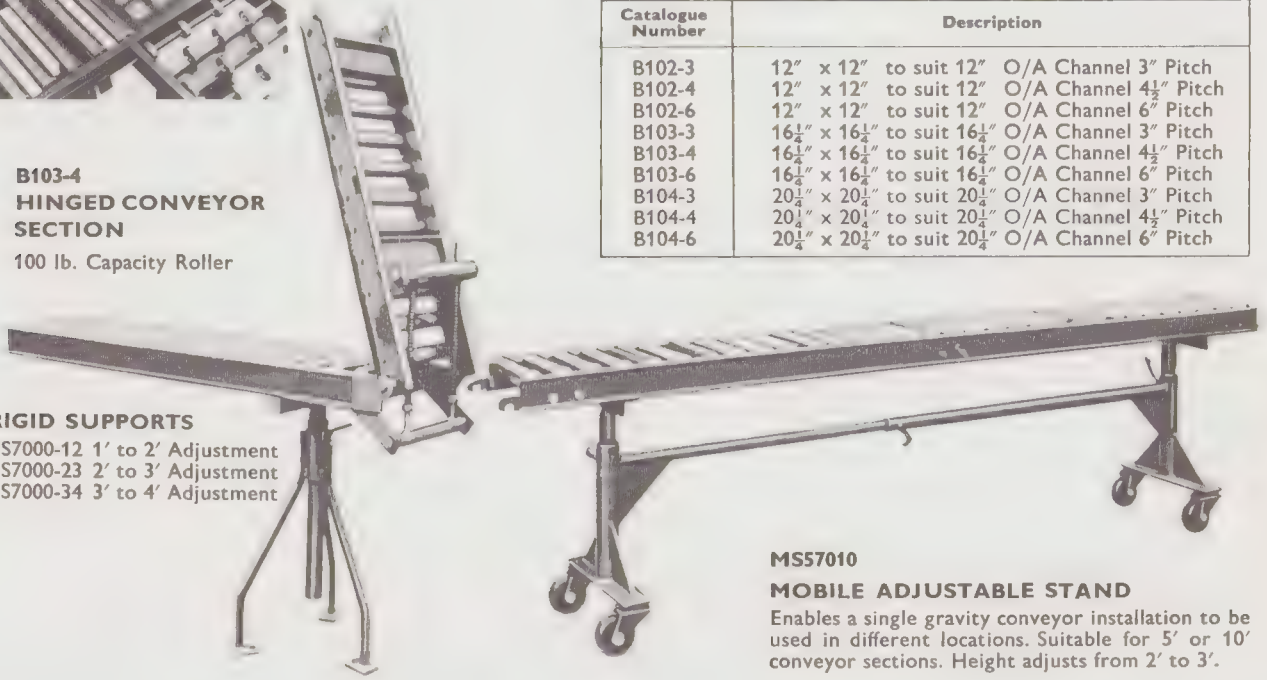




BALL TRANSFER TABLES

Catalogue Number	Description
B102-3	12″ x 12″ to suit 12″ O/A Channel 3″ Pitch
B102-4	12″ x 12″ to suit 12″ O/A Channel 4½″ Pitch
B102-6	12″ x 12″ to suit 12″ O/A Channel 6″ Pitch
B103-3	16¼″ x 16¼″ to suit 16¼″ O/A Channel 3″ Pitch
B103-4	16¼″ x 16¼″ to suit 16¼″ O/A Channel 4½″ Pitch
B103-6	16¼″ x 16¼″ to suit 16¼″ O/A Channel 6″ Pitch
B104-3	20¼″ x 20¼″ to suit 20¼″ O/A Channel 3″ Pitch
B104-4	20¼″ x 20¼″ to suit 20¼″ O/A Channel 4½″ Pitch
B104-6	20¼″ x 20¼″ to suit 20¼″ O/A Channel 6″ Pitch

B103-4
HINGED CONVEYOR SECTION
100 lb. Capacity Roller

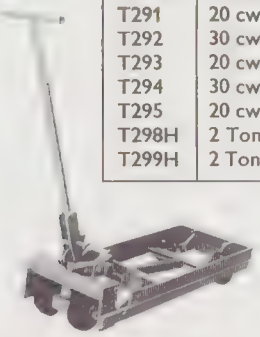


RIGID SUPPORTS
RS7000-12 1′ to 2′ Adjustment
RS7000-23 2′ to 3′ Adjustment
RS7000-34 3′ to 4′ Adjustment

MS57010
MOBILE ADJUSTABLE STAND
Enables a single gravity conveyor installation to be used in different locations. Suitable for 5′ or 10′ conveyor sections. Height adjusts from 2′ to 3′.

"BRAEMAR" ELEVATING TRUCKS

Catalogue Number	Capacity	Frame Size	Height		Wheel Used
			Low	Raised	
T290	30 cwt.	18″ x 36½″	6″	8″	C665PA (Cast iron)
T291	20 cwt.	18″ x 36½″	6″	8″	C716PA (Rubber)
T292	30 cwt.	18″ x 36½″	6″	8″	C850PA (Rubber)
T293	20 cwt.	18″ x 36½″	6″	8″	C661PA (Cast iron)
T294	30 cwt.	18″ x 36½″	6″	8″	C850NPA (Nylon)
T295	20 cwt.	18″ x 36½″	6″	8″	C716NPA (Nylon)
T298H	2 Ton	18″ x 39″	6″	8″	C850NPA C851NPA
T299H	2 Ton	18″ x 39″	6″	8″	C676PA C665PA



EXTENDED OR SPECIAL TRUCKS
Can be Supplied to Order.

Elevating truck can be used from the side or the end.

STEEL SKID

P300

Overall Length 36″
Overall Width 24″
Overall Height 8¼″
Capacity 30 Cwt.

44 GALLON DRUM RACKS

C611 Wheels used.

D30

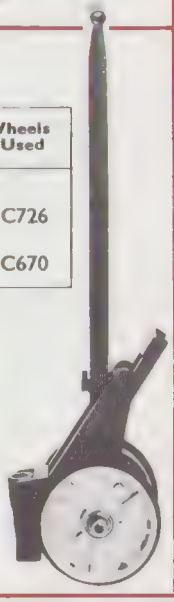
SCISSOR LIFT TRUCK

Hydraulically operated used to transport and lift to work table height. Maximum table height 32¾″. Minimum 5¾″.

Table 36″ x 18″, 800 lbs. capacity.
SL800C Cast Iron Wheels.
SL800N Nylon Wheels.

LIFT JACKS

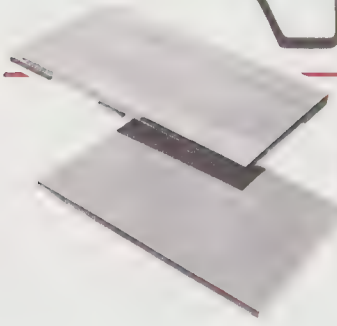
Catalogue Number	Specifications	Wheels Used
J200	Lift Jack with 8″ Rubber Tyred Wheels	C726
J201	Lift Jack with 8″ Cast Iron Wheels	C670

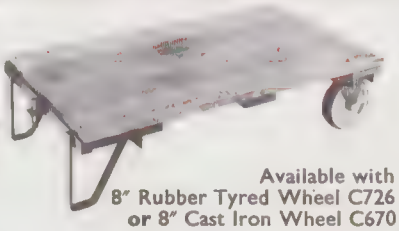


CHASSIS SETS

Comprises Rear Unit with 8″ Wheels and Front Unit with Legs.

Catalogue Number	Specifications	Wheels Used
J270	27″ Wide Chassis set with 8″ Rubber Tyred Wheels	C726
J273	30″ Wide Chassis set with 8″ Rubber Tyred Wheels	C726
J276	33″ Wide Chassis set with 8″ Rubber Tyred Wheels	C726
J278	36″ Wide Chassis set with 8″ Rubber Tyred Wheels	C726
J271	27″ Wide Chassis set with 8″ Cast Iron Wheels	C670
J274	30″ Wide Chassis set with 8″ Cast Iron Wheels	C670
J277	33″ Wide Chassis set with 8″ Cast Iron Wheels	C670
J279	36″ Wide Chassis set with 8″ Cast Iron Wheels	C670





Available with 8″ Rubber Tyred Wheel C726 or 8″ Cast Iron Wheel C670

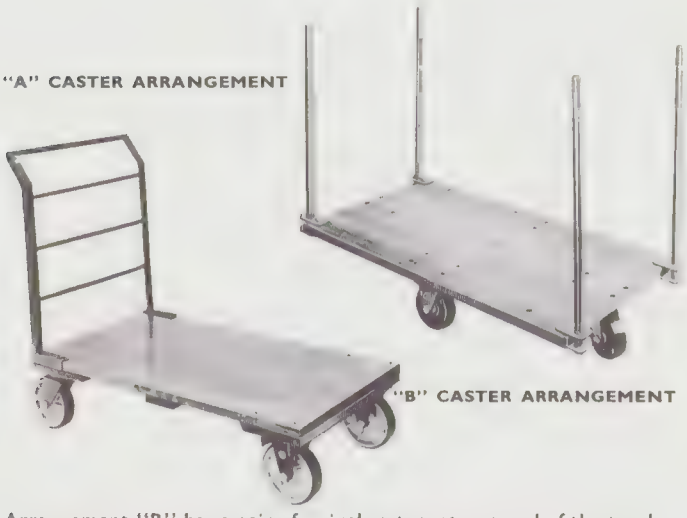
LIFT JACK PLATFORMS

Catalogue Number		Deck Size
Timber Deck	Steel Deck	
J210	J214	48″ x 27″
J211	J215	60″ x 30″
J212	J216	72″ x 33″
J213	J217	72″ x 36″

"BRAEMAR" PLATFORM TRUCKS

Arrangement "A" has a pair of rigid casters located at a point midway along each side member of the deck, with a swivel caster centrally located at each end of the truck. Very manoeuvrable.

"A" CASTER ARRANGEMENT



"B" CASTER ARRANGEMENT

Arrangement "B" has a pair of swivel casters at one end of the truck and a pair of rigid casters at the other end, producing a stable four-corner mounting.

Catalogue Number		Deck Size	Wheel Type
Timber Deck	Steel Deck		
P100	P106	42″ x 24″	Available with 6″
P101	P107	48″ x 27″	Rubber Tyred Wheel
P102	P108	52″ x 27″	C716; **OR** 6″ Cast
P103	P109	60″ x 30″	Iron Wheel C661
P104	P110	72″ x 33″	**OR** 6″ Nylon Tyred
P105	P111	72″ x 36″	Wheel C716N

Catalogue Number		Deck Size	Wheel Type
Timber Deck	Steel Deck		
P112	P118	42″ x 24″	Available with 8″
P113	P119	48″ x 27″	Rubber Tyred Wheel
P114	P120	52″ x 27″	C726; **OR** 8″ Cast
P115	P121	60″ x 30″	Iron Wheel C670;
P116	P122	72″ x 33″	**OR** 8″ Nylon Tyred
P117	P123	72″ x 36″	Wheel C726N

PLATFORM TRUCK HANDLES

To Suit all 4-Wheeled Platform Trucks

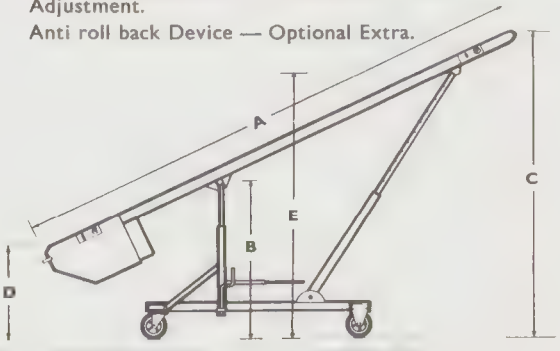
H73 Handle	33″ Wide
H74 Handle	36″ Wide
H75 Handle	30″ Wide
H76 Handle	27″ Wide
H77 Handle	24″ Wide

"BRAEMAR" PORTABLE BOOSTER CONVEYOR

AVAILABLE IN THREE STANDARD MODELS

Belt Speed — 75 feet per min.
Package Capacity — 140 lbs.
Total Load Capacity — 250 lbs.

Fitted with:—
Single or Three Phase Reversible Geared Motor with Stop Start Switch both ends. 14″ Rough Top Rubber Belt, 6″ H.D. Casters, Rubber or Cast Iron Wheels. Two Floor Locks.
Telescopic adjustable arm Hydraulic Height Adjustment.
Anti roll back Device — Optional Extra.



Catalogue Number	Motor H.P.	A	B	C	D	E	F
BC900	¼	11′ 0″	36″	5′ 6″	34″	90″	18″
BC910	½	15′ 6″	36″	7′ 9″	34″	90″	18″
BC920	½	21′ 0″	36″	10′ 6″	34″	90″	18″

HAND TRUCKS

K.1 LIGHT HAND TRUCK

K.7 MEDIUM HAND TRUCK

K.11 SACK TRUCK

K.14 HEAVY DUTY GENERAL PURPOSE

K.17 STAIRCLIMBER TRUCK

K.20 APPLIANCE AND TV TRUCK

K21. APPLIANCE AND TV TRUCK

K.23 REFRIGERATOR TRUCK

K.27 REFRIGERATOR

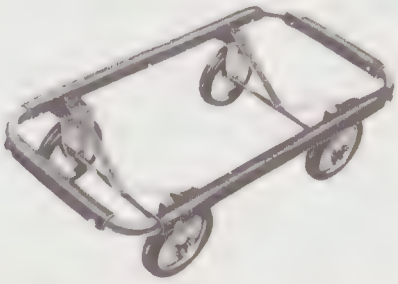
K.29 CORDIAL TRUCK No. 1

K.31 CORDIAL

K.36 "LIFTMOBILE"

K.32 LIQUID GAS TRUCK

K.38 PIANO TROLLEY



K.33 MIGHTYMOVER

TYPE		WHEELS	SHOE	FRAME	HEIGHT	WIDTH	LOAD
Light Hand Truck	K.1	6″ x 1¼″ SRT	11″ x 5″	¾″ Tube Steel	40½″	17″	200 lbs.
	K.2	,,	11″ x 15″	,, ,,	,,	,,	,,
	K.3	,,	11″ x 21″	,, ,, ,,	,,	,,	,,
Medium Hand Truck	K.4	8″ x 1½″ Bonded	14″ x 8¾″	1 1/32″ O.D. Tube Steel	45½″	19″	300 lbs
	K.5	8″ x 1½″ SRT	,,	,, ,, ,, ,,	,,	,,	,,
	K.6	8″ x 1½″ BRT	,,	,, ,, ,, ,,	,,	,,	,,
	K.7	8″ x 2½″ SRT	,,	,, ,, ,, ,,	,,	,,	,,
	K.8	10½″ x 2½″ SPW	,,	,, ,, ,, ,,	,,	,,	,,
	K.9	10½″ x 2½″ PW	,,	,, ,, ,, ,,	,,	,,	,,
Sack Truck	K.10	8″ x 1½″ Bonded	9¼″ x 4″	,, ,, ,, ,,	42″	18″	,,
	K.11	8″ x 1½″ BRT	,,	,, ,, ,, ,,	,,	,,	,,
Heavy Duty Gen. Purpose	K.12	8″ x 1½″ Bonded	14″ x 4″	,, ,, ,, ,,	46″	20″	400 lbs.
	K.13	8″ x 2½″ SRT	,,	,, ,, ,, ,,	,,	,,	,,
	K.14	10½″ x 2½″ SPW	,,	,, ,, ,, ,,	,,	,,	,,
	K.15	10½″ x 2½″ PW	,,	,, ,, ,, ,,	,,	,,	,,
Stairclimber Truck	K.16	S/C Assembly with Rachet Webbing	14″ x 7″	,, ,, ,, ,,	48½″	19½″	300 lbs.
	K.17	As above plus plastic-covered frame.	,,	,, ,, ,, ,,	,,	,,	,,
Appliance & T.V. Trucks	K.18	8″ x 1½″ Bonded	14″ x 7″	1 1/32″ O.D Special Light	44½″	18½″	200 lbs.
	K.19	8″ x 1½″ BRT	,,	,, ,, Tube Steel	,,	,,	,,
	K.20	Stair Climber Assembly	14″ x 7″	,, ,, ,, ,,	,,	,,	,,
	K.21	8″ x 2½″ SRT	14″ x 7″	,, ,, ,, ,,	,,	,,	,,
	K.22	10½″ x 2½″ SPW Ratchet optional extra All plastic covered	,,	1 1/32″ O.D. Tube Steel	48½″	20½″	400 lbs.
Refrigerator Trucks	K.23	10½″ x 2½″ SPW	18″ x 7″	,, ,, ,, ,,	50″	24″	,,
	K.24	10½″ x 2½″ PW	,,	,, ,, ,, ,,	,,	,,	,,
	K.25	10½″ x 2½″ SPW	,,	,, ,, ,, ,,	60″	,,	,,
	K.26	10½″ x 2½″ PW	,,	,, ,, ,, ,,	,,	,,	,,
	K.27	S/C Assembly All with Ratches and Nylon Webbing	,,	,, ,, ,, ,,	,,	,,	,,
Case and Crate Truck	K.28	8″ x 1½″ Bonded	14″ x 7″	,, ,, ,, ,,	48″	18½″	300 lbs.
	K.29	8″ x 1½″ BRT	,,	,, ,, ,, ,,	,,	,,	,,
	K.30	10½″ x 2½″ SPW	,,	,, ,, ,, ,,	,,	,,	,,
	K.31	10½″ x 2½″ SPW	12″ x 7″	,, ,, ,, ,,	53″	,,	,,
Liquid Gas Truck	K.32	10½″ x 2½″ SPW	17¼″ x 3¼″	,, ,, ,, ,,	48″	24″	400 lbs
Mighty Mover	K.33	8″ x 2½″ STR Front	12½″ x 7″	,, ,, ,, ,,	50″	18″	,,
		6″ x 1¼″ BRT Rear		,, ,, ,, ,,	,,	,,	,,
Bath Truck	K.34	8″ x 2½″ SRT Front 6″ x 1¼″ BRT	Special				
"Liftmobile"	K.35	10½″ x 2½″ PW	18½″ x 13″ Forks	1 1/32″, ¾″	60″	24″	300 lbs.
	K.36	S/C Assembly	,,	,, ,,	,,	,,	,,
Piano Trolley	K.37	8″ x 1½″ Bonded	—	1 1/32″ O.D. Tube Steel	Length 30″	15″	400 lbs.
	K.38	8″ x 1½″ BRT	-	,, ,, ,, ,,	,,	,,	,,
	K.39	8″ x 2½″ SRT	—	,, ,, ,, ,,	,,	,,	,,

WHEEL CODE

8″ x 1½″ Bonded — Solid Rayon bonded rubber wheel with plain steel bearing.
6″ x 1¼″ SRT — Aluminium Alloy wheel with slip-on rubber tyre.
8″ x 1½″ SRT — Aluminium Alloy wheel with slip-on tyre.
8″ x 2½″ SRT — Aluminium Alloy wheel with slip-on rubber tyre with self-lubricating bronze bearings.
8″ x 1½″ BRT — Bolted aluminium discs with clenched in tyre.
10½″ x 2½″ SPW — Roller bearing steel disc wheel with semi-pneumatic tyre.
10½″ x 2½″ PW — Roller bearing steel disc wheel with full pneumatic tyre.
S/C Assembly — Rotating Spiders each of 3 wheels to permit stair climbing.
Ratchet — Quick-grip ratchet nylon webbing to hold load in place.

WHEELBARROWS

BUILDERS WOODFRAME 4/5 CU. FT. BARROWS

Wheels — Pneumatic (400 x 8/16″ x 4″) or Steel. Fitted with Special Nose Piece, Lifting Eye, Plank Straps, Recessed Tray Bolts and Reinforcing Base.

No. 51
Tray Capacity4Cu.Ft.(Wet)
Tray Size 38″ x 25″ x 12″
Weight 71½ lbs.

No. 77
Tray Capacity4Cu.Ft.(Wet)
Tray Size 37″ x 24½″ x 12″
Weight 70 lbs.

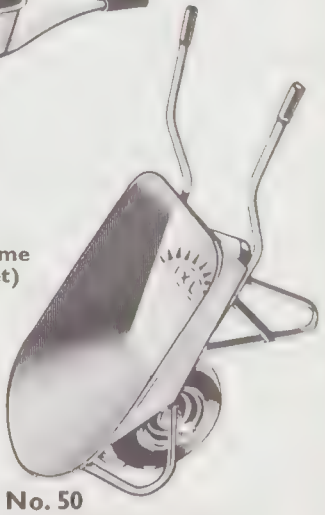
BUILDERS AND INDUSTRIAL STEEL TUBULAR FRAME BARROWS

Wheels — Pneumatic (400 x 8/16″ x 4″) or Steel

No. 52
Similar to 51 with Steel Frame
Tray Capacity 4 Cu. Ft. (Wet)
Tray Size 38″ x 25″ x 12″
Weight 76 lbs.

No. 53
Tray Capacity4Cu.Ft.(Wet)
Tray Size 35″ x 29″ x 8″
Weight 66 lbs.

No. 54
Tray Capacity 6 Cu. Ft.
Tray Size 43″ x 35″ x 10″
Weight 77 lbs.

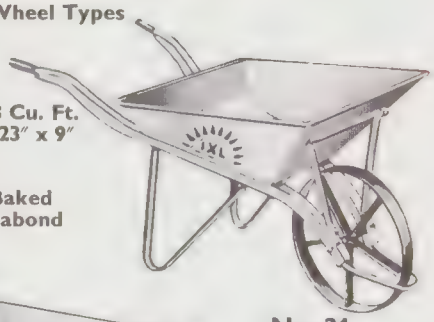


No. 50
Tray Capacity 3½ Cu. Ft.
Tray Size 36″ x 23″ x 10″
Weight 60 lbs.

GARDEN/UTILITY ANGLE IRON FRAME BARROWS

Available in 5 Wheel Types

No. 25
Tray Capacity 3 Cu. Ft.
Tray Size 27″ x 23″ x 9″
Weight 33 lbs.
Straight Front
Tray Finish — Baked Enamel or Galvabond

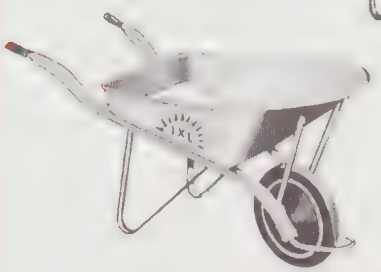


No. 21
Tray Size
29″ x 21″ x 7″
Weight 20 lbs.
Straight Front
Tray Finish — Galvabond

No. 27
Tray Capacity 3 Cu. Ft.
Tray Size 30″ x 25½″ x 9″
Weight 33 lbs.
Pour Front
Tray Finish—Baked Enamel

No. 29
Tray Capacity
3 Cu. Ft.
Tray Size
30″ x 25½″ x 9″
Weight 33 lbs.
Pour Front
Tray Finish — Galvabond

No. 44
Tray Capacity 4 Cu. Ft.
Tray size 34½″ x 27″ x 10″
Weight 40 lbs.
Pour Front
Tray Finish — Hot Dipped Galvanised



No. 48
Tray Capacity
3½ Cu. Ft.
Tray Size
35″ x 23½″ x 10″
Weight 40 lbs.
Pour Front
Tray Finish — Baked Enamel

WHEELBARROWS

GARDEN AND GENERAL PURPOSE STEEL TUBULAR FRAME BARROWS

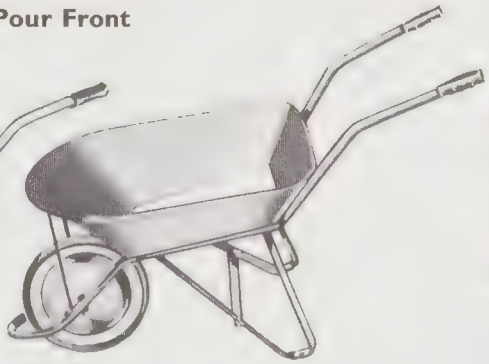
All with Rounded Pour Front

No. 33

Tray Capacity 3 Cu. Ft.
Tray Size 29½″ x 24½″
Weight 35 lbs.
Finish — Baked Enamel

No. 34

Same as No. 33
Tray Finish — Galvabond



No. 31

Tray Size 29½″ x 24½″
Weight 30 lbs.
Finish — Baked Enamel

No. 36

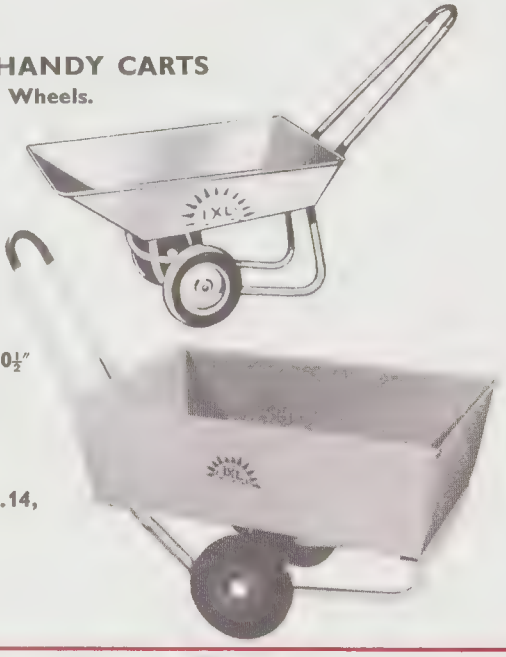
Tray Capacity 4 Cu. Ft.
Tray Size 34″ x 27½″
Weight 42 lbs.
Finish — Galvabond

TWO WHEELER HANDY CARTS

Semi Pneumatic 8″ x 2″ Wheels.

No. 37

Tray Capacity 4 Cu. Ft.
Tray Size 34″ x 27½″
Weight 50 lbs.
Heavy Duty version of No. 36
with 1 1/16 x 12 G Frame
Finish — Baked Enamel



No. 10

Tray Size 29″ x 21″ x 7″
Weight 20 lbs.

No. 14

Tray Size 27½″ x 18½″ x 10½″
Weight 24 lbs.
Finish — Baked Enamel
or Galvabond

No. 12

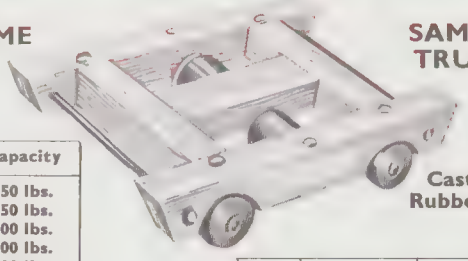
Similar to No. 10 and No. 14,
has Skids fitted to
operator's end.
Tray Size 29″ x 19″ x 9″
Weight 26 lbs.

HAND TRUCKS — WOOD FRAME

Available Full or Half Strap

Illustrated Full Strap

No.	Height	Wheels	Capacity
1	42″	Cast Iron 6½″ x 1¼″	150 lbs.
		Rubber 6″ x 1½″	150 lbs.
2	45″	Cast Iron 6½″ x 1¼″	200 lbs.
		Rubber 6″ x 1½″	200 lbs.
3	48″	Cast Iron 7″ x 2″	300 lbs.
		Rubber 7″ x 2″	300 lbs.
4	51″	Cast Iron 7½″ x 2″	600 lbs.
		Rubber 7″ x 2″	400 lbs.
5	54″	Cast Iron 7½″ x 2″	800 lbs.
		Rubber 8″ x 2″	500 lbs.
6	60″	Cast Iron 8″ x 3″	1000 lbs.
		Rubber 8″ x 2″	700 lbs.



SAMSON TRUCKS

Cast Iron or
Rubber Wheels

No.	Dimensions	No. Wheels	Capacity
2	22″ x 16″	4	½ Ton
3	22″ x 16″	5	1 Ton
4	22″ x 16″	6	2 Ton
5	30″ x 18″	6	3 Ton
6	36″ x 24″	6	4 Ton

PACKING SCREWS 1/4", 3/8", 1/2", 5/8", 3/4"

L347 SOLID

L348 FLEXIBLE

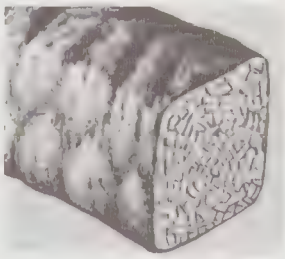
PACKINGS

SELF LUBRICATING ASBESTOS PACKING
FIREFLY PT 258

For use in Rotary and Reciprocating Pumps, Steam Engines and for Valves at temperatures up to 600°F.

CONSTRUCTION

Square section Plaited Asbestos. Each Strand is impregnated with Special Lubricant to last the life of the packing, Graphite Finish.



L349 SIZES 1/4" to 1 1/2"

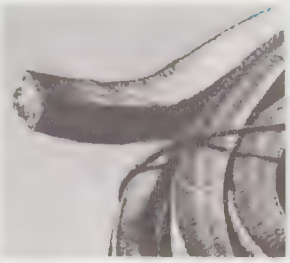
PACK
Supplied in Coils.

SELF LUBRICATING ASBESTOS PACKING
FIREFLY No. 90

For Oil and Petroleum Products.

CONSTRUCTION

Square section plaited Asbestos. Each strand is impregnated with special lubricant to last the life of the packing. Graphite finished.



L352 SIZES 1/4" to 3/4"

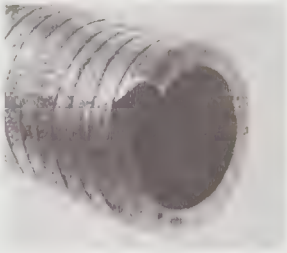
PACK
7 lb. (approx.) coil per Box.

CROSS EXPANSION PISTON ROD PACKING
FIREFLY No. 70, FORMERLY FORTEX

For Low Pressure Steam, Ammonia, Air, Oil, Water.

CONSTRUCTION

Square section made up of diagonal layers of proofed duck and rubber. Graphite finished.



L350 SIZES 3/16" to 3/4", 1/2" to 1 1/2"

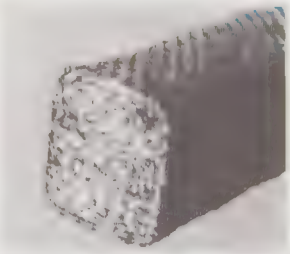
PACK
Two 12' coils per Box.
One 12' coil per Box.

ASBESTOS METALLIC PACKING CPW185
(MURRAYS METALLIC)

For General Purpose Steam Packing.

CONSTRUCTION

Square section rolled from proofed Asbestos Cloth and White metal wire. Graphite finished.



L353 SIZES 1/4" to 1 1/2"

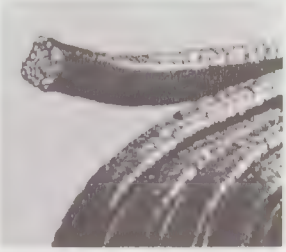
PACK
In long coils.
Cut lengths to your requirements.

SELF LUBRICATING ASBESTOS PACKING
FIREPLY No. 20, FORMERLY LOMOTO

For High Pressure Superheated Steam, Hot Water, Oil, Air, Alkalis and Weak Acids.

CONSTRUCTION

Square section plaited Asbestos. Each strand is impregnated with special lubricant which will last the life of the packing. Graphite finished.



L351 SIZES 1/4" to 1"

PACK
7 lb. (approx.) coil per Box.

SELF LUBRICATING ASBESTOS VALVE TWIST
FIREFLY No. 10, FORMERLY ZENITH

For Valve Spindles, High Pressure and Temperature Steam, Air, Water, Alkalis and Weak Acids.

CONSTRUCTION

Round section Twisted Asbestos Yarn. Each strand is impregnated with special lubricant to last the life of the packing. Graphite finished.

L354 SIZES 1/16" to 3/8"

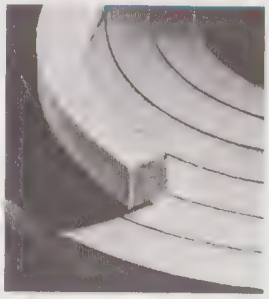
PACK
1 lb. spool per Box

PACKINGS

HYDRAULIC PUMP PACKING

FIREFLY No. 125, FORMERLY BLAKES

For "Inside packed" Plungers or Pistons handling Hot or Cold Water, Ammonia, Brine, Air. Maximum temperature 300°F.



CONSTRUCTION

Square section multiple layers proofed cotton duck vulcanised together. In two types. Hard for hot water. Soft for cold water.

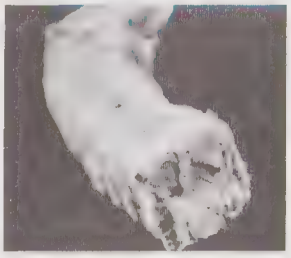
L355 — **SIZES** ¼" to 1½" — **PACK** 12' coils

COTTON CONDENSER CORD Not illustrated

L356 — **Size No. 2, 3, 4** **Approx. Diameter** 3/32", ⅛", 5/32" — **Sold in 16 oz. Balls**

PLAITED COTTON PACKING (DRY OR GREASY)

Dry for Ammonia
Greasy for Water



CONSTRUCTION

Square section Plaited Cotton Strands. Dry or grease impregnated.

SIZE
¼" to 1½"

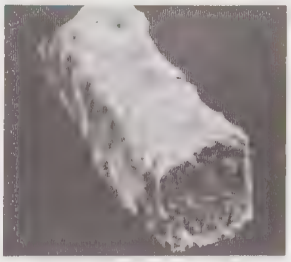
L357

PACK
In long coils.
Cut lengths to your requirements.

GREASY JUTE PACKING

FORMERLY GREASY HEMP

For General Hydraulic Purposes.



CONSTRUCTION

Square plaited jute impregnated with lubricant.

SIZE
¼" to 1½"

L358

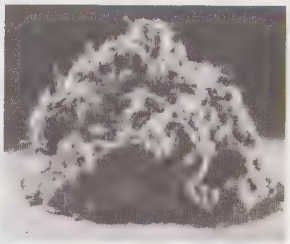
PACK
In long coils.
Cut lengths to your requirements.

DRY OR PLUMBERS' HEMP (Not illustrated)

L359 — **Also known as Spun Yarn. Available in 6 ply coils weighing 14 lbs. or 8 ply coils weighing 28 lbs.**

INDURATED ASBESTOS FIBRE (COCK FIBRE)

For Packing Asbestos Packed Cocks and Steam Valve Glands.



CONSTRUCTION

Loose Asbestos fibre. Blue for Hot Water, Red for Steam.

L360 — **PACK** 1 lb. Tins.

ASBESTOS TAPE — METALLIC

For Saturated Steam Joints, Cylinder Covers and Boiler Door Joints.

CONSTRUCTION

Made from proofed Asbestos cloth reinforced with fine Brass Wire.

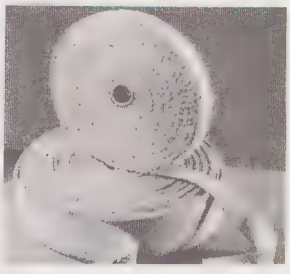
SIZES
Thickness ⅛", 1/16", ¼"
Width ½" to 2½"

L361

PACK
In rolls or cut lengths.

ASBESTOS WEBBING OR TAPE — NON-METALLIC

For Insulation of Hot or Cold Pipes and many Electrical Applications.



CONSTRUCTION

Woven Asbestos throughout.

SIZES
Thickness 1/16" and ⅛"
Width ¾" to 3"

L362

PACK
In long rolls.
Cut to suit your requirements.

BOILER DOOR JOINTS (METALLIC ASBESTOS)

For Manhole and Mudhole joints on Boilers.

CONSTRUCTION

Made from Proofed Asbestos Cloth reinforced with fine Brass Wire.

L363 — **SIZES** All sizes, oval or round

PACKINGS

ASBESTOS PLAITED YARN PACKING (ROUND PLAITED ASBESTOS)

For Low Pressure Packings and Jointings and Lagging of Pipes.

CONSTRUCTION
Round section Plaited Asbestos Fibre.

SIZE
¼" to 1" diam.

L364

PACK
In long coils.
Cut lengths to suit your requirements.

ASBESTOS CORD TWISTED

For Small Pipe Insulations and Low Pressure Packing.

CONSTRUCTION
Round section Twisted Asbestos Fibre Cord.

SIZES
⅛" to 1"

L365

PACK
Available in Spools

ASBESTOS SEWING TWINE — METALLIC
(Not illustrated)

For Sewing Asbestos Cloth.

CONSTRUCTION
Fine Non-ferrous Wire Bound with Asbestos.

L366

SIZE
1/16" diam.

PACK
1 lb. and 4 lb. (approx.) ball

ASBESTOS ROPE LAGGING (ASBESTOS ROPE)

For General Insulation on Steam or Hot Water Pipes.

CONSTRUCTION
Round section open mesh braided Asbestos cover with Asbestos Fibre Core.

L367

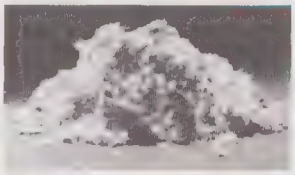
SIZES
½" to 2" diam.

PACK
100' coils.

85% MAGNESIA COMPOSITION LAGGING

For Boiler and Pipe Lagging.

CONSTRUCTION
85% Carbonate of Magnesia,
15% Asbestos Fibre.



L368

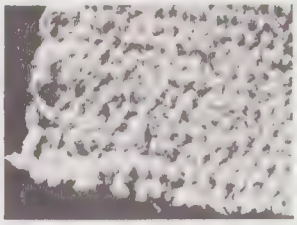
PACK
40 lb. Bags

ASBESTOS CLOTH — PLAIN (LAGGING CLOTH)

For Manufacturing Asbestos Gloves and Clothing, General Heat Insulation and Fire Proof Curtains.

CONSTRUCTION
Woven Asbestos throughout.

SIZES
Thickness 1/16" and ⅛"
Width 42"



L369

PACK
Rolls approximately 45 yards.
Cut to suit your requirements.

ASBESTOS METALLIC CLOTH — PROOFED

For Saturated Steam Joints.

CONSTRUCTION
Woven Asbestos Fibre reinforced with fine Brass Wire and proofed.

SIZES
Thickness 1/16" and ⅛"
Width 42"

L370

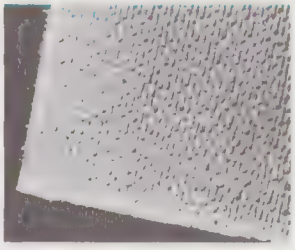
PACK
Rolls approx. 17½ yds for 1/16"
8 yds. for ⅛"
Cut to suit your requirements.

ASBESTOS MILLBOARD

For General purpose Insulation, for making Exhaust Joints and combined with Copper Sheathing for Cylinder Head Gaskets.

CONSTRUCTION
Compressed Asbestos in sheet form.

SIZES
Thickness 1/16" to ½"
Sheet size 40" x 40" or
48" x 40"



L371

PACK
Wooden crate 5 cwt. (approx.)
Single sheets supplied.

SECTIONAL PIPE LAGGING

To suit Steam or Copper Pipe.

CONSTRUCTION
Fibertex Rockwool or 85% Magnesia.

L372

Size of Pipe ½" to 12"
Section Length 36"

ASBESTOS COMPOSITION (ASBESTOS LAGGING MEAL)

For Boiler and Pipe Lagging.

CONSTRUCTION
An Asbestos Meal Composition. Mixes with water to give a paste which provides an efficient "plaster applied" insulation.

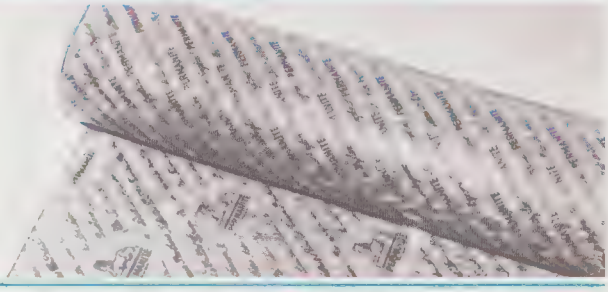
L373

PACK 1 cwt. Bags.

COMPRESSED ASBESTOS FIBRE JOINTING (C.A.F.)

PERMANITE PLAIN JOINTING — C.A.F. 261

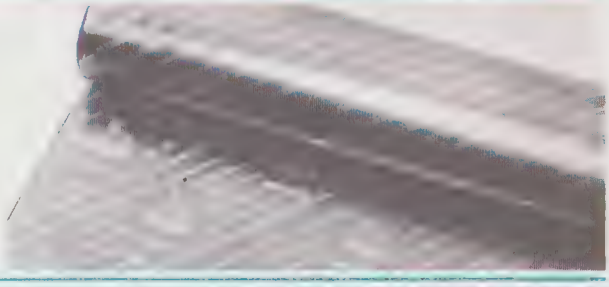
For use against the severest high pressure steam conditions. Suitable also for oil, petrol and many solvents. Although primarily a steam and oil jointing, it is satisfactory against alkalis and acids (except strong mineral acids). It is in daily use on valve testing equipment operating at a steam pressure of 2000 lbs./sq. in. on pipe flanges of 2" bore and at a temperature of 1000°F. superheat.



L374 — Thickness $\frac{1}{64}$", $\frac{1}{32}$", $\frac{1}{16}$", $\frac{1}{8}$"
Sheet Size 60" x 40" Red in colour.
60" x 80"

PERMANITE METALLIC JOINTING — C.A.F. 178

Reinforced with steel wire gauze for high pressure and high temperature conditions in steam plants, air compressors, internal combustion engines. In steam installations it is regularly used for pressures up to 700 lbs./sq. in. at temperatures up to 900°F. in B.S. Flanges up to 10" nominal pipe size and up to 550 lbs./sq. in. in 16" nominal pipe size flanges. It will withstand considerably higher pressures where small diameter pipe flanges are in use.



L375 — Thickness $\frac{1}{64}$", $\frac{1}{32}$", $\frac{1}{16}$", $\frac{1}{8}$"
Sheet Size 60" x 40" Graphited finish.
60" x 80"

PERMANITE ACID JOINTING — C.A.F. 393

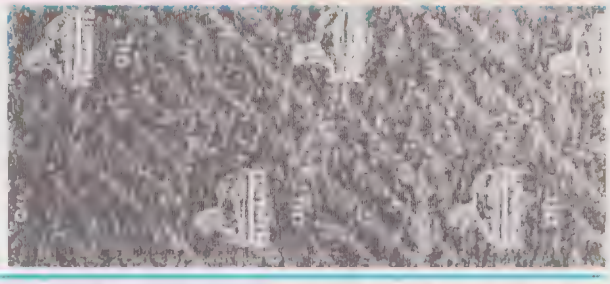
Will withstand the destructive action of nitric, hydrochloric and sulphuric acids (including oleum), particularly in their concentrated forms. "Permanite" Acid Jointing satisfactorily withstands acids at temperatures up to 400°F.

It will withstand the conditions of pressure and temperature to be found in modern chemical and allied industries.

L376 — Thickness $\frac{1}{16}$", $\frac{1}{8}$"
Sheet Size 40" x 40" Light Grey

PERMANITE OIL JOINTING — C.A.F. 229

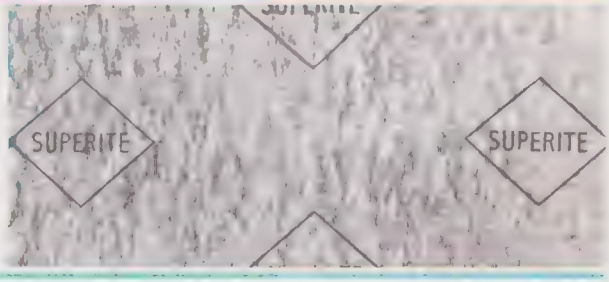
Will resist the action of hot oils, petrol, benzol and organic solvents (ether, ethyl and amyl acetates, glycol). It is used on oil cracking plants and coal tar distillation units at temperatures up to 900°F. and pressures of 650 lbs./sq. in. in B.S. Flanges up to 10" nominal pipe size; and 500 lbs./sq. in. in 16" nominal pipe size flanges. Permanite Oil Jointing is the ideal jointing for conditions calling for high resistance to hydro-carbons.



L377 — Thickness $\frac{1}{64}$", $\frac{1}{32}$", $\frac{1}{16}$", $\frac{1}{8}$"
Sheet Size 60" x 40", 60" x 80". Black in colour.

SUPERITE COMPRESSED ASBESTOS FIBRE JOINTING

A good quality jointing made expressly for J. Blackwood and Son Limited. For saturated steam at high pressure and temperature, oil, petrol and many solvents, as well as alkalis and weak acids.

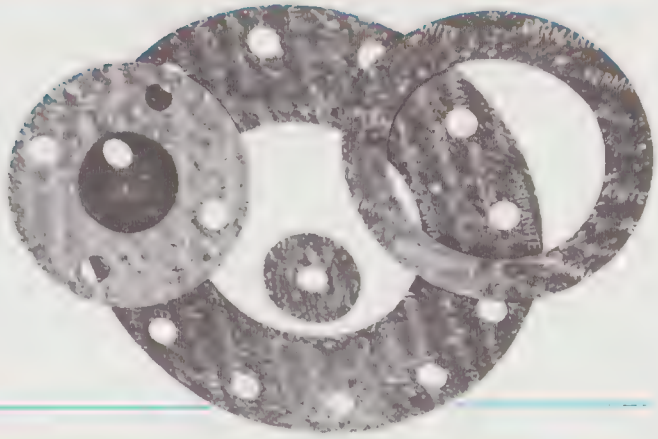


L378 — Thickness $\frac{1}{32}$", $\frac{1}{16}$", $\frac{1}{8}$"
Sheet Size 60" x 40"
60" x 80" Red in colour.

L379 — KLINGERIT JOINTING

PLAIN, OILIT, KLINGERIT 1000 Wire Reinforced
Thickness $\frac{1}{64}$", $\frac{1}{32}$", $\frac{1}{16}$", $\frac{1}{8}$"
Sheet Size 60" x 40"
60" x 80"

FLANGE GASKETS



READY CUT FLANGE GASKETS AVAILABLE TO SUIT BRITISH STANDARD

FLANGE TABLES "D", "E", "H"

SIZES ½" to 8" Other Sizes and Tables Made to Order

TABLE "E" and "H" FLANGE GASKETS "Full Face" and "Ring Type" are manufactured from 1/16" "Permanite" Jointing, which is recommended for use against Steam, Hot Oils, Petroleum Distillates, Solvents and Refrigerants, at pressure up to 800 lbs. per sq. in. and temperatures up to 950°F.

TABLE "D" FLANGE GASKETS "Full Face" and "Ring Type" are manufactured from 1/8"" Rubber Insertion which is recommended for joints on all water installations.

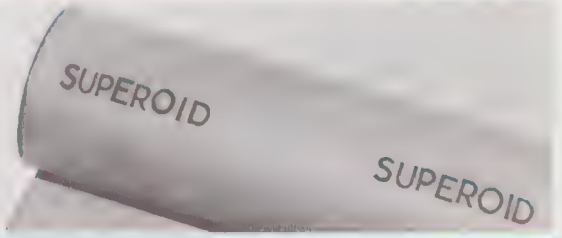
OIL JOINTING

O.J.2. OIL JOINTING (Superoid)

Made to British Ministry of Supply Specifications DTD776. This Vegetable Fibre based jointing is widely used in all types of oil and petrol joints.

Thickness	.010"	1/64"	1/32"	1/16"	1/8"	1/16"
Roll width	36"	36"	36"	36"	36"	42"

L380 Cut in any length to suit your requirements.



L381 **GENUINE VELLUMOID OIL JOINTING**

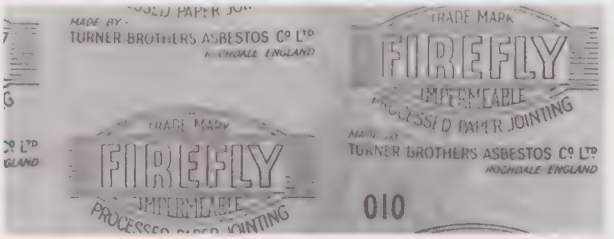
Rolls 36" wide Thickness .010", 1/64", 1/32", 1/16", 1/8"
Sheets 36" x 36" Thickness 1/16"

FIREFLY OIL JOINTING

For Oil or Petrol Joints where a more economical Jointing will satisfactorily cover the application.

CONSTRUCTION Made from high quality Processed Paper.

L382 Thickness .006", .010", 1/64", 1/32", 1/16", 1/8"
Roll width 36"
Cut to any length to suit your requirements.



OAKENCORK OIL JOINTING

For Automotive and similar Oil Joints.

CONSTRUCTION Granulated Cork and Processed Paper bonded together with Glycerine.

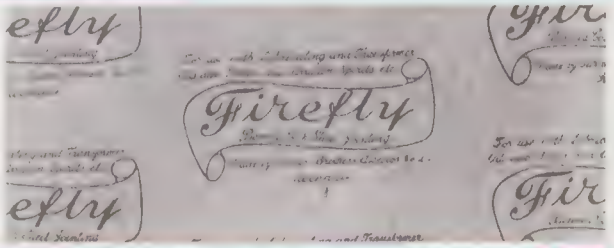
L383 Thickness 1/32", 1/16", 1/8"
Roll width 42"
Cut to any length to suit your requirements.

NEOPRENE BONDED CORK (NP63) OIL JOINTING

For Aviation Fuel, Lubricating Oil, Ethylene, Glycol up to 150°C. Transformers, Weak Acids.

CONSTRUCTION Granulated Cork jointing with Oil and Spirit-resisting Neoprene Rubber.

L384 Thickness 1/32", 1/16", 1/8", 3/16", 1/4"
Sheet Size 48" x 30"

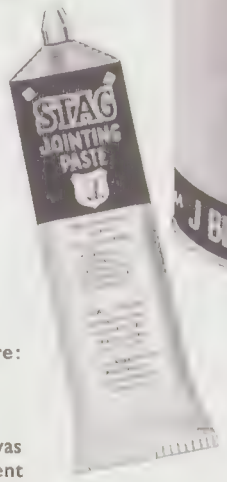


"STAG" PIPE JOINTING PASTE

Approved by M.W.S. & D.B. for use on Wrought Iron & Galvanised Pipes.

FOR LEAK PROOF JOINTS UNDER THE MOST EXACTING PLANT OPERATING CONDITIONS

Water proof, oil proof, anti-corrosive, non-poisonous, semi-liquid applied direct to joint, suitable for foodstuffs, beverages, patent medicines, toilet preparations and domestic water services, "STAG" will not affect surfaces to which it is applied, for screwed joints use as thin as possible.



"STAG" WITHSTOOD RIGOROUS TESTS

Carried out by National Physical Laboratory, England and confirmed by two Sydney Testing Laboratories.

TEST 1 — WATER
Tested with water at 1000 lbs. per square inch pressure: No leakage.

TEST 2 — PETROL
Tested with petrol at 1000 lbs. per sq inch pressure: No leakage.

TEST 3 — HEAVY OIL
Tested with heavy mineral gear oil at 1000 lbs. per square inch pressure: No leakage.

TEST 4 — STEAM
Because steam at 1000 lbs. pressure was unavailable, the "Stag" joint was baked for five hours at a controlled temperature of 547°F. (equivalent to the temperature of saturated steam at 1000 lbs. per square inch pressure). This joint was then subjected to water pressure of 1000 lbs. per square inch. No leakage was apparent — even after such a rigorous test.

TEST 5 — CHEMICALS
"Stag" proved resistant to — Acetone: Trichlorethylene: Dilute Sulphuric Acid (50% strength): Dilute Hydrochloric Acid (25% strength).

AVAILABLE IN THREE SIZES
3 oz. Tube
12 oz. and
24 oz. Tins

SOLVENT "STAG" can be dissolved or thinned by using methylated Spirit.

GAUGE GLASSES AND LUBRICATOR GLASSES

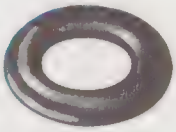
Imported glasses of the highest quality for use with steam or Hydraulic equipment. Have a high resistance to thermal shock and corrosive or errosive action. Outside diameters only are guaranteed. Inside diameters vary slightly.

L385 Available with Fused, or Cut and Ground Ends in any length to the maximum shown.

Outside Diameter	¼"	5/16"	⅜"	7/16"	½"	9/16"	⅝"
Maximum Length	24"	24"	36"	72"	72"	72"	72"
Outside Diameter	**11/16"**	**¾"**	**⅞"**	**1"**	**1⅛"**	**1¼"**	**1½"**
Maximum Length	72"	72"	72"	72"	72"	72"	72"

GAUGE GLASS RINGS

L386 ROUND RUBBER
¼", ⅜", ½", ⅝", ¾", 1"

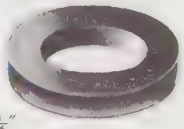


L387 HEXAGON RUBBER
⅝", ¾"

L388 WOODITE
½", ⅝", ¾"

L389 HEXAGON DEWRANCE
½", 9/16", ⅝", ¾"

L390 SQUARE SECTION RUBBER
1¼" × ¾" × 3/16"
1¼" × ¾" × ¼"



L391 CYLINDRICAL RUBBER
1¼" × ¾" × 1"

JOINTING COMPOUNDS

L392 "STAG" JOINTING PASTE

Semi-liquid jointing paste for oil, steam, water, or chemical joints. High or low pressure and temperature with or without fibrous jointings. Approved by the Metropolitan Water Sewerage and Drainage Board for jointing screwed wrought iron and galvanised pipes. — 3 oz. Tubes, 12 oz. Tins, 24 oz. Tins

L393 DIXON'S JOINTING COMPOUND

Graphited P.J.C. for use on high pressure and temperature steam lines — 1 lb. Tins, 5 lb. Tins

L394 DIXON'S CLEAN WHITE JOINTING COMPOUND

Non-poisonous, highly recommended for coating gaskets, bolts, nuts, boiler tube caps, boiler manhole plates, gas retort doors, condensers, for all threaded or faced joints of steam, hot or cold water, gas, acid, brine, air. — 1 lb. Tins

L395 MANGANESITE JOINTING COMPOUND

Non-poisonous for steam, water, gas and air joints, used same as red lead. — 16 oz. Cakes, 1 lb. Tins, 5 lb. Tins

L396 GROZIER'S JOINTING COMPOUND

Graphited base, for steam, water, gas and air. — 16 oz. Tins

L397 GROZIER'S KLEEN JOINTING COMPOUND

Hot and cold water, gas, steam and non-poisonous applications. — 16 oz. Tins

L398 FLEXMENT JOINTING COMPOUND

Asbestos plastic compound, requires no hemp or tow, suitable for gas, water, oil or steam. — 1 lb. Tins, 7 lb. Tins

L399 ROLLS ROYCE JOINTING COMPOUND

A universal jointing compound. Gas, water, oil and steam up to temperatures of 250°C. — 2 oz. bottles, ¼ gal. Tins

L400 DIXON'S GRAPHITE SEAL JOINTING COMPOUND

Non-poisonous safe joint sealing of equipment handling and conveying highly purified edible mineral, animal and vegetable oils used in foods, medicines, cosmetics; does not flavour, discolour or ferment, also hot and cold oil, petrol, all gases (non-aqueous), naphtha, kerosene, creosote, air, vacuum, vapour (non-aqueous), tar and high pressure steam. — 1 lb. Tins

L401 BOSS WHITE JOINTING COMPOUND

Ensures tight joints on acetylene or gas installations, water, steam, superheated steam. Non-poisonous. — 1 lb. Tins

L402 POWER PLUS GASKET CEMENT

2 oz., ½ Pint and 1 Pint Tins

L403 PEP GASKET GOO

8 oz Tins, 4 oz. tubes and 2 oz. Bottles

L404 LOCTITE PRODUCTS

	Pack
LOCKING	
Nut Lock, Stud Lock, Screw Lock	2 c.c., 10 c.c., 50 c.c., 250 c.c.
RETAINING	
Retaining, Compound Bearing Mount	2 c.c., 10 c.c., 50 c.c., 250 c.c.
SEALING	
Pipe sealant	2 c.c. 10 c.c. 2 oz. 8 oz.
Hydraulic sealant	10 c.c. 2 oz. 8 oz.
Refrigerant Sealant	10 c.c. 2 oz. 8 oz.
Plastic Gasket	2 c.c. 2 oz. 8 oz.
Tube Sealant	2 c.c. 2 oz. 8 oz.
Weld Sealant	2 oz. 8 oz.
ANTI SEIZE LUBRICANT	¼ lb., 1 lb., ½ gal., 1 gal., 5 gal.

L405 PERMACEL 29 TAPE

Made with strong non-corrosive adhesive backing. Recommended for protecting pipes against rust and corrosion.
Widths 1", 1½", 2" — Length 60 yards

L406 PLASTIC VINYL TAPE

All Colours ¾" wide x 22 yards

L407 INSULATION TAPE

¾" wide x 25 yds. roll

RIBBON DOPE THREAD SEALANT

Unsintered teflon in convenient ribbon form. Unaffected by virtually all acids, bases, gases and organic solvents. Thermally stable over temperature range — 450°F. to 500°F, tasteless, odourless, does not contaminate foodstuffs, beverages or medical preparations.

L408 BLACKWOODS "EBONY" ½" wide x 240" or 480" long

L409 TURNER BROS. ½" wide x 240" or 480" long

L410 PERMACEL 412 ½" wide x 240" or 480" long; ¾" wide x 480" long; 1" wide x 480" long

L411 W. S. SHAMBAN ½" wide x 240" or 480" long; ¾" wide x 240" or 480" long; 1" wide x 240" or 480" long

Also available

TEFLON CORD	Sizes 1/16", 1/8", 3/16", ¼"
TEFLON ROD 48" Long	Sizes ¼", 5/16", ⅜", 7/16", ½", 9/16", ⅝", ¾", 7/8", 1", 1⅛", 1¼", 1⅜", 1½".
TEFLON TUBING 12" Long	Sizes ⅛" to 16" I.D., 1½" to 17½" O.D.
TEFLON SHEET	Sizes 24" x 24", Thickness 1/16" to ¼" 36" roll, Thickness 1/16" and ⅛".

JOINTINGS

L412 **CORK SHEETS for Jointing**
Oil and Petrol
Thickness 1/16", 1/8", 3/16", 1/4", 1/2"
Sheet Size 36" x 24"

L413 **CORK BOARD for Insulation**
Thickness 1", 2"
Sheet Size 36" x 12"

L414 **NEOPRENE RUBBER SHEET**
A Synthetic Rubber Jointing which is Oil and Petrol Resistant.
Thickness 1/32", 1/16", 1/8", 3/16", 1/4"
In rolls 36" wide
Cut to any length to suit your requirements.

L415 **NEOPRENE RUBBER INSERTION**
Thickness 1/16", 1/8" in Rolls 36" wide

L416 **RUBBER SHEET Red (Soft) Grey (Hard)**
Thickness 1/16", 1/8", 3/16", 1/4", 5/16", 3/8", 1/2", 5/8", 3/4"
Sheet Size 72" x 36"
Valves or sheet cut to suit your requirements.

L417 **RUBBER INSERTION**
For many Jointing Jobs, particularly Water Lines.
CONSTRUCTION. Layers of rubber sheet and cloth bonded together to form a tear resisting sheet jointing.
Width of Rolls 36" and 48"

Thickness	1/32"	1/16"	1/8"	3/16"	1/4"
Weight per Square yard	2¾ lbs.	5½ lbs.	10 lbs.	16½ lbs.	20 lbs.

L418 **SCANLONS STRING GROMETS**
Tube Sizes 1/2", 3/8", 1/4", 7/16" and 1"

L419 **DIAPHRAGM RUBBER**
A Special Heat Resisting Rubber for Valve diaphragms.
Thickness 1/8", 3/16", 1/4"
In rolls 36"
Cut to any length to suit your requirements.
Diaphram cut to any size.

L420 **FIBRE SHEET**
For Water Joints, Gear Blanks and Clutch Plates.
6' x 4' Sheets 1/64" to 1" thickness
Cut to suit your requirements.

L421 **EBONITE SHEET — Black (not loaded)**
For Electrical Work or Piston and Pump Rings.
Thickness 1/8", 1/4", 3/8", 1/2", 5/8", 3/4"
Sheet Size 36" x 24"

L422 **TAYLOR CORRUGATED BRASS JOINT RINGS**
Available in Blanks and Flange Rings in sizes as required.

L423 **RUBBER CORD — Pure Gum Rubber**
Round Starting Gate or Catapult Rubber.
3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8" diameter

L424 **RUBBER STRIP — Rectangular (Port light Rubber)**
All sizes available

L425 **RUBBER STRIP — SQUARE**
Sizes 1/4", 3/16", 3/8", 7/16", 1/2", 5/8", 3/4"

L426 **HAIR FELT**
A Low-priced Hot Water Pipe Insulation.
Stocked in 50' Rolls 2", 3", 4" wide 3/8" thickness

L427 **DIXON'S AIR SPUN GRAPHITE No. 400**
A selected powdered graphite of unrivalled smoothness and endurance, not affected by heat, cold, steam, acids and alkalis. Similar in application to No. 1 and No. 2 Flake.
14 oz. Tins
5 lb. Tins

L428 **DIXON'S No. 1 FLAKED GRAPHITE**
1 lb. Tins
5 lb. Tins

L429 **DIXON'S No. 2 FLAKED GRAPHITE**
Dixon's flaked graphite is prepared for general use in two sizes of flake. No. 1 is the larger and is recommended for heavy bearings, cylinders of steam engines, compressors, gears, and wherever friction is severe; also useful for coating gaskets, packings, pipe fittings, etc. No. 2 is the smaller flake and is especially suitable for coating steam engine cylinders, valves and close fitting bearings.
1 lb. Tins
5 lb. Tins

L430 **DIXON'S MICROFINE**
A general purpose graphite powder.
14 oz. Tins
5 lb. Tins

L431 **DIXON'S PUFFITE PACK**
Handy pack for puffing graphite into "hard-to-get-at" places
1⅛ ozs
Polyethylene Packs

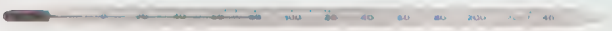
L432 **AVARC (No. 1 Flaked Graphite).**
1 lb. Tins
5 lb. Tins

L433 **AVARC (No. 2 Flaked Graphite).**
1 lb. Tins
5 lb. Tins

L434 **VELROC BANDAGE**
This is a cloth in a range of widths treated with Plaster of Paris and is a quick and economical way of repairing damaged lagging.
2" x 36" (or Pack of 24)
3" x 36" (or Pack of 24)
4" x 36" (or pack of 12)
6" x 36" (or Pack of 12)
8" x 36" (or pack of 12)

THERMOMETERS

Enquiries welcomed for all thermometers, including dial types, not shown on this page. Specials can be made to order at short notice.



L435 GLASS PENCIL TYPE
Scale engraved on stem

SIZES 12" — 10°/110°C

6"	8"	10"	12"	16"
—	240°	150°F, 200°F, 240°F, 300°F, 400°F	150°F, 240°F, 300°F, 400°F, 500°F, 600°F, 800°F	1000°F

L436 METAL CASES TO SUIT
Available; Brass or Nickel Plated

L437 COPPER ENGINE ROOM (BREWERS)
Scale — 20° to 240°F.

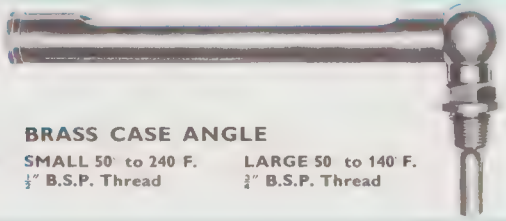
L438 COPPER TORPEDO
Refrigeration Replaceable Scale — 20° to 150°F.

L439 HALF ROUND WOOD REFRIGERATION
Fixed Scale — 20° to 130°F.

L440 BRASS CASE, TOP ZERO — REFRIGERATION
Threads ½" B.S.P. Scale reading from top — 20° to 100°F.

L441 BRASS CASE BRINE Similar Case to Top Zero with Normal Scale Reading — 30° to 110°F.

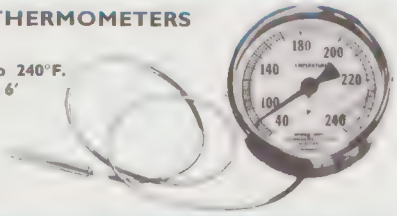
L442 BRASS CASE PLAIN ½" B.S.P. Thread
SMALL 60° to 240°F, LARGE 60° to 240°F, 100° to 1000°F.



L443 BRASS CASE ANGLE
SMALL 50° to 240°F. ½" B.S.P. Thread
LARGE 50° to 140°F. ¾" B.S.P. Thread

L444 BEARING METAL THERMOMETER
Overall Length 21"
6" Special Steel Stem — Scale 100° to 900°F. — Wooden Handle

L445 DIAL THERMOMETERS
Diameter 4" Range 60° to 240°F.
Supplied Complete with 6' Copper Capillary Tube



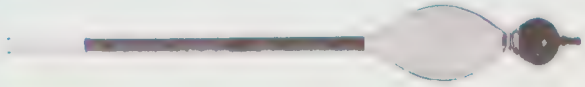
L446 MEAT SPEAR THERMOMETERS
Range 0° to 100°F.

L447 SYPHON PATTERN BATTERY HYDROMETER

L448 DISTILLED WATER 1 and 2 Gal. Jars

L449 TWADDELL'S HYDROMETER
Type 5760 Range 24-48 Stem No. 2

SALINOMETERS



L450 GLASS TYPE Graduated in 1/32"

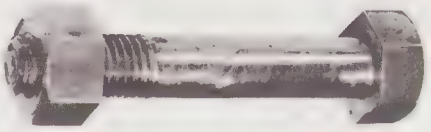
L451 WHITE METAL TYPE Graduated in 1/32"

L452 SALINOMETER POTS — Copper

BOLTS AND NUTS — BRIGHT STEEL

WHITWORTH THREAD

Hexagon Head
Round Shank
Hexagon Nut



Diameter ▶	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	◀ Diameter
Length	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Length
1/2"	100	100	100	—	—	—	—	—	—	—	—	—	—	—	1/2"
5/8"	100	100	—	—	—	—	—	—	—	—	—	—	—	—	5/8"
3/4"	100	100	100	100	—	—	—	—	—	—	—	—	—	—	3/4"
7/8"	100	100	—	100	100	100	—	—	—	—	—	—	—	—	7/8"
1"	100	100	100	100	100	100	50	—	—	—	—	—	—	—	1"
1 1/4"	100	100	100	100	100	50	50	50	25	—	—	—	—	—	1 1/4"
1 1/2"	100	100	100	100	100	50	50	50	25	25	—	—	—	—	1 1/2"
1 3/4"	100	100	100	100	100	50	50	50	25	25	—	—	—	—	1 3/4"
2"	100	100	100	100	100	50	50	50	25	25	10	—	—	—	2"
2 1/4"	50	100	100	50	50	50	50	50	25	25	10	—	—	—	2 1/4"
2 1/2"	50	100	100	50	50	50	50	50	25	25	10	—	—	—	2 1/2"
2 3/4"	50	100	50	50	50	50	50	25	25	25	10	—	—	—	2 3/4"
3"	50	100	50	50	50	50	50	25	25	25	10	A.O.	A.O.	—	3"
3 1/4"	—	100	50	50	50	50	25	25	25	25	—	A.O	A.O	—	3 1/4"
3 1/2"	50	100	50	50	50	50	25	25	25	25	10	A.O.	A.O.	A.O.	3 1/2"
3 3/4"	—	100	50	50	50	50	25	25	25	25	—	—	—	—	3 3/4"
4"	50	100	50	50	50	50	25	25	25	25	10	A.O	A.O.	A.O.	4"
4 1/2"	—	50	50	50	50	50	25	25	25	10	10	A.O.	A.O.	A.O.	4 1/2"
5"	—	50	50	50	50	25	25	25	10	10	10	A.O.	A.O.	A.O.	5"
5 1/2"	—	50	50	50	50	25	25	25	10	10	10	A.O.	A.O.	A.O.	5 1/2"
6"	—	50	50	50	25	25	25	25	10	10	10	A.O.	A.O.	A.O.	6"
6 1/2"	—	—	—	25	25	25	—	25	10	10	A.O.	A.O.	A.O.	A.O.	6 1/2"
7"	—	—	—	25	25	25	25	25	10	10	A.O.	A.O.	A.O.	A.O.	7"
7 1/2"	—	—	—	25	25	25	—	25	10	10	A.O.	A.O.	A.O.	A.O.	7 1/2"
8"	—	—	—	25	25	25	—	25	10	10	A.O.	A.O.	A.O.	A.O.	8"
8 1/2"	—	—	—	—	—	25	—	25	10	10	A.O.	A.O.	A.O.	A.O.	8 1/2"
9"	—	—	—	—	—	25	—	25	10	10	A.O	A.O.	A.O.	A.O.	9"
9 1/2"	—	—	—	—	—	25	—	25	10	10	A.O.	—	—	—	9 1/2"
10"	—	—	—	—	—	25	25	25	10	10	A.O.	A.O.	A.O.	A.O.	10"
11"	—	—	—	—	—	10	—	10	10	10	A.O.	A.O.	A.O.	A.O.	11"
12"	—	—	—	—	—	10	—	10	10	10	A.O.	A.O.	A.O.	A.O.	12"
13"	—	—	—	—	—	10	—	10	10	10	A.O.	—	—	—	13"
14"	—	—	—	—	—	10	—	10	10	10	A.O.	—	—	—	14"

U.N.C. U.N.F. (UNIFIED) THREAD

Diameter ▶	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"
Length	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack
1/2"	100	100	—	—	—	—	—	—	—	—	—
5/8"	100	100	100	—	—	—	—	—	—	—	—
3/4"	100	100	100	100	100	—	—	—	—	—	—
7/8"	100	100	100	100	—	—	—	—	—	—	—
1"	100	100	100	100	100	100	50	50	—	—	—
1 1/4"	100	100	100	100	100	50	50	50	—	—	—
1 1/2"	100	100	100	100	100	50	50	50	25	25	—
1 3/4"	100	100	100	100	100	50	50	50	25	25	—
2"	100	100	100	100	100	50	50	50	25	25	10
2 1/4"	50	100	100	50	50	50	50	50	25	25	—
2 1/2"	50	100	100	50	50	50	50	50	25	25	10
2 3/4"	50	100	50	50	50	50	50	25	25	25	—
3"	50	100	50	50	50	50	50	25	25	25	10
3 1/4"	—	100	50	50	50	50	25	25	25	25	—
3 1/2"	50	100	50	50	50	50	25	25	25	25	10
3 3/4"	50	100	50	50	50	50	25	25	25	25	—
4"	50	100	50	50	50	50	25	25	25	25	10
4 1/2"	—	50	50	50	50	50	25	25	25	10	10
5"	—	50	50	50	50	25	25	25	10	10	10
5 1/2"	—	50	50	50	50	25	25	25	10	10	10
6"	—	50	50	50	25	25	25	25	10	10	10
6 1/2"	—	—	—	—	—	—	—	25	10	10	A.O.
7"	—	—	—	25	—	25	—	25	10	10	A.O.
7 1/2"	—	—	—	—	—	—	—	—	—	—	A.O.
8"	—	—	—	25	—	25	—	25	10	10	A.O.
9"	—	—	—	—	—	25	—	25	10	—	—
10"	—	—	—	—	—	25	—	25	10	—	A.O.

UNIFIED THREAD BOLTS and NUTS

The range of Bright Bolts and Nuts formerly termed SAE are made to conform to the American Standard ASA-B-18.2 — 1962 Finished Hexagon Bolts and Nuts, and ASA-B1.1 — 1951.

Both the ASA-B-18.2 and the ASA-B1.1 Standards cover bolt and nut dimensions and thread tolerances as agreed on by Great Britain and America and now known as the Unified Standard. Bolts and nuts are desginated UNF for fine and UNC for coarse threads.

Generally speaking, the UNF and UNC threads are interchangeable with the old SAE, NF and NC threads.

There is One Major Change of Thread — the 1" NF/SAE Bolt and Nut have always been 14 TPI. The new 1" UNF will be 12 TPI. The 1" NC was 8TPI, the 1" UNC remains 8 TPI.

BOLTS AND NUTS — BRIGHT STEEL

B.S.F. (British Standard Fine) Thread

Diameter ▶	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	◀ Diameter
Length	Stabdard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Length
1/2"	100	100	—	—	—	—	—	—	—	—	1/2"
5/8"	100	100	—	—	—	—	—	—	—	—	5/8"
3/4"	100	100	100	—	—	—	—	—	—	—	3/4"
7/8"	100	100	—	—	—	—	—	—	—	—	7/8"
1"	100	100	100	100	100	50	50	—	—	—	1"
1 1/4"	100	100	100	100	50	—	50	25	—	—	1 1/4"
1 1/2"	100	100	100	100	50	50	50	25	25	—	1 1/2"
1 3/4"	100	100	100	100	50	—	50	25	—	—	1 3/4"
2"	100	100	100	100	50	50	50	25	25	—	2"
2 1/4"	100	100	50	50	50	—	50	25	25	—	2 1/4"
2 1/2"	100	100	50	50	50	50	50	25	25	—	2 1/2"
2 3/4"	100	50	50	50	50	—	25	25	25	—	2 3/4"
3"	100	50	50	50	50	50	25	25	25	10	3"
3 1/4"	100	50	50	50	50	25	25	25	25	10	3 1/2"
4"	100	50	50	50	50	25	25	25	25	10	4"
4 1/2"	50	50	50	50	50	25	25	25	10	10	4 1/2"
5"	50	50	50	50	25	25	25	10	10	10	5
5 1/2"	50	50	50	50	25	25	25	10	10	10	5 1/2"
6"	50	50	50	25	25	25	25	10	10	10	6"

BOLTS AND NUTS — STAINLESS STEEL

WHITWORTH THREAD. Grades 303, 304 and 305. Other grades can be supplied.

1/4" Diameter		5/16" Diameter		3/8" Diameter		1/2" Diameter		5/8" Diameter		3/4" Diameter	
Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack
3/4"	100	3/4"	100	3/4"	100	3/4"	—	—	—	—	—
1"	100	1"	100	1"	100	1"	75	1"	30	1"	25
1 1/4"	100	1 1/4"	100	1 1/4"	100	1 1/4"	75	1 1/4"	30	1 1/4"	25
1 1/2"	100	1 1/2"	100	1 1/2"	100	1 1/2"	75	1 1/2"	30	1 1/2"	25
1 3/4"	100	1 3/4"	100	1 3/4"	100	1 3/4"	75	1 3/4"	30	1 1/4"	25
2"	100	2"	100	2"	100	2"	50	2"	30	2"	25
2 1/4"	100	2 1/4"	100	2 1/4"	100	2 1/4"	50	2 1/4"	30	2 1/4"	20
2 1/2"	100	2 1/2"	100	2 1/2"	100	2 1/2"	50	2 1/2"	30	2 1/2"	20
2 3/4"	100	2 3/4"	100	2 3/4"	100	2 3/4"	50	2 3/4"	30	2 3/4"	20
3"	100	3"	100	3"	100	3"	50	3"	30	3"	20
—	—	3 1/4"	100	3 1/4"	100	3 1/4"	50	3 1/4"	20	—	—
3 1/2"	100	3 1/2"	100	3 1/2"	100	3 1/2"	50	3 1/2"	20	3 1/2"	20
4"	100	4"	100	4"	100	4"	30	4"	10	4"	10
—	—		—	—	—	—	—	4 1/2"	10	5"	10
—	—	—	—	—	—	—	—	—	—	6"	10

BOLTS AND NUTS — BRASS

WHITWORTH THREAD

3/16" Diameter	1/4" Diameter	5/16" Diameter	3/8" Diameter	7/16" Diameter	1/2" Diameter	5/8" Diameter	3/4" Diameter
Lentgh	Length	Length	Length	Length	Length	Length	Length
3/4"	3/4"	3/4"	3/4"	—	—	—	—
1"	1"	1"	1"	1"	1"	—	—
1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	—
1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	—
1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	—
2"	2"	2"	2"	2"	2"	2"	2"
2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"
2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
—	—	—	—	—	—	2 3/4"	2 3/4"
3"	3"	3"	3"	3"	3"	3"	3"
—	—	—	—	—	—	3 1/4"	3 1/4"
3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"	3 1/2"
—	—	—	—	—	—	3 3/4"	3 3/4"
4"	4"	4"	4"	4"	4"	4"	4"
4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
5"	5"	5"	5"	5"	5"	5"	5"
5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"	5 1/2"
6"	6"	6"	6"	6"	6"	6"	6"

THREADED ROD

(All Thread)

Screwed Whitworth Thread

STOCK SIZES

Steel 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1", 1 1/4", 1 1/2", 1 3/4"

Brass 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1".

Length 24".

Also available — Sizes 1/32" to 4".

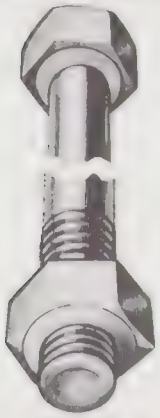
Lengths 36" and 12 feet.
Special lengths up to 70 feet.

Screwed Whitworth.
BSF, BA, UNC, UNF.

Right hand, left hand, single or Multi start threads.

High tensile steel, stainless steel, brass and aluminium.

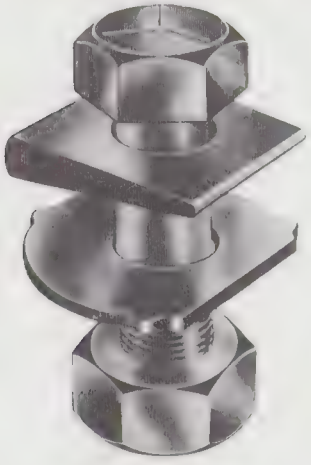
HEXAGON BOLTS AND NUTS — PRECISION BRIGHT FORGED



WHITWORTH THREAD AND U.N.F. 35-45 TONS PER SQ. INCH TENSILE

1/4" Diameter		5/16" Diameter		3/8" Diameter		1/2" Diameter		5/8" Diameter		3/4" Diameter	
Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack
3/4"	150	1/4"	150	1/4"	75	—	—	—	—	—	—
1"	150	1"	150	1"	75	1"	75	—	—	—	—
1 1/4"	150	1 1/4"	150	1 1/4"	75	1 1/4"	75	—	—	—	—
1 1/2"	150	1 1/2"	150	1 1/2"	75	1 1/2"	75	1 1/2"	30	1 1/2"	20
1 3/4"	150	1 3/4"	150	1 3/4"	75	1 3/4"	75	1 3/4"	30	1 3/4"	20
2"	150	2"	150	2"	50	2"	50	2"	30	2"	20
2 1/4"	75	2 1/4"	75	2 1/4"	50	2 1/4"	50	2 1/4"	30	2 1/4"	20
2 1/2"	75	2 1/2"	75	2 1/2"	50	2 1/2"	50	2 1/2"	30	2 1/2"	20
2 3/4"	75	2 1/2"	75	2 1/2"	50	2 1/2"	30	2 3/4"	30	2 3/4"	15
3"	75	3"	75	3"	50	3"	30	3"	30	3"	15
—	—	—	—	3 1/2"	30	3 1/2"	30	3 1/2"	20	3 1/2"	15
—	—	—	—	4"	30	4"	30	4"	15	4"	15

HIGH STRENGTH STRUCTURAL FRICTION GRIP BOLTS



High Tensile Steel Bolts and Nuts with Hardened Washers For Use in Structural Friction Grip Joints — A.S.S. No. B157-1960

Screwed Unified National Coarse (U.N.C.) Thread

HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND WASHERS To AS. B157

Length	5/8" Diameter	3/4" Diameter	7/8" Diameter	1" Diameter
	Std. Pack	Std. Pack	Std. Pack	Std. Pack
1 1/2"	300	175	—	—
1 3/4"	300	175	—	—
2"	300	175	100	75
2 1/4"	250	175	100	75
2 1/2"	250	150	100	75
2 3/4"	250	150	100	60
3"	200	150	100	60
3 1/4"	200	125	100	60
3 1/2"	200	125	75	60
3 3/4"	—	125	75	60
4"	—	125	75	60
4 1/2"	—	100	75	50
5"	—	100	75	50
5 1/2"	—	100	50	50
6"	—	100	50	50
HEAT TREATED WASHERS				
Taper Washers	800	600	600	500
Round Washers	1200	1000	700	600
Clipped Washers	1200	1000	700	600
HEAVY HEX. NUTS	800	500	400	300

1 1/8" and 1 1/4" Diameter also available.

HEXAGON BOLTS AND NUTS — HIGH TENSILE STEEL

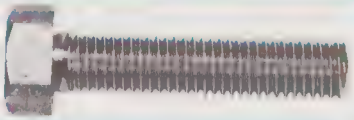
U.N.C. and U.N.F. THREAD. 53-56 TONS PER SQ. INCH TENSILE — AMERICAN S.A.E. GRADE 5

Whitworth and B.S.F. Threads in Sizes and Tensile Strength to suit your needs.

1/4" Diameter		5/16" Diameter		3/8" Diameter		7/16" Diameter		1/2" Diameter		5/8" Diameter		3/4" Diameter	
Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack
3/4"	150	1/4"	150	1/4"	150	1/4"	75	—	—	—	—	—	—
1"	150	1"	150	1"	150	1"	75	1"	75	—	—	—	—
1 1/4"	150	1 1/4"	150	1 1/4"	150	1 1/4"	75	1 1/4"	75	—	—	—	—
1 1/2"	150	1 1/2"	150	1 1/2"	150	1 1/2"	75	1 1/2"	75	1 1/2"	25	1 1/2"	25
1 3/4"	150	1 3/4"	150	1 3/4"	150	1 3/4"	75	1 3/4"	75	1 3/4"	25	1 3/4"	25
2"	150	2"	150	2"	75	2"	75	2"	50	2"	25	2"	25
2 1/4"	150	2 1/4"	150	2 1/4"	75	2 1/4"	75	2 1/4"	75	2 1/4"	25	2 1/4"	20
2 1/2"	150	2 1/2"	75	2 1/2"	75	2 1/2"	75	2 1/2"	50	2 1/2"	25	2 1/2"	20
2 3/4"	150	2 3/4"	75	2 3/4"	75	2 3/4"	75	2 3/4"	25	2 3/4"	25	2 3/4"	20
3"	150	3"	75	3"	75	3"	75	3"	25	3"	25	3"	20
3 1/2"	150	3 1/2"	75	3 1/2"	75	3 1/2"	75	3 1/2"	25	3 1/2"	25	3 1/2"	20
4"	150	4"	75	4"	75	4"	75	4"	25	4"	25	4"	10
—	—	—	—	—	—	—	—	4 1/2"	25	4 1/2"	25	4 1/2"	10
—	—	—	—	—	—	—	—	5"	25	5"	25	5"	10
—	—	—	—	—	—	—	—	5 1/2"	25	5 1/2"	25	5 1/2"	10
—	—	—	—	—	—	—	—	6"	25	6"	25	6"	10

3/8" and 3/4" Diameter up to 8"; 7/8" Diameter up to 5" now available.

SET SCREWS — BRIGHT STEEL HEXAGON HEAD

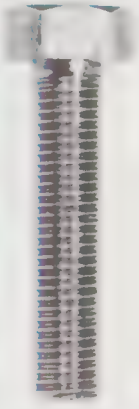


WHITWORTH THREAD

Diam. ▶	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	◀ Diam.
Length	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Length
3/8"	100	100	100	100	—	—	—	—	—	—	—	—	—	3/8"
1/2"	100	100	100	100	100	100	—	—	—	—	—	—	—	1/2"
5/8"	100	100	100	100	100	100	—	—	—	—	—	—	—	5/8"
3/4"	100	100	100	100	100	100	—	50	—	—	—	—	—	3/4"
7/8"	100	100	100	100	100	—	—	—	—	—	—	—	—	7/8"
1"	100	100	100	100	100	100	50	50	25	—	—	—	—	1"
1 1/4"	100	100	100	100	100	50	50	50	25	25	10	—	—	1 1/4"
1 1/2"	100	100	100	100	100	50	50	50	25	25	10	—	—	1 1/2"
1 3/4"	100	100	100	100	100	50	50	50	25	25	10	—	—	1 3/4"
2"	100	100	100	100	100	50	50	50	25	25	10	—	—	2"
2 1/4"	—	100	100	50	50	50	50	50	25	25	10	—	—	2 1/4"
2 1/2"	—	100	100	50	50	50	50	50	25	25	10	A.O.	A.O.	2 1/2"
2 3/4"	—	100	50	50	50	50	50	25	25	25	10	—	—	2 3/4"
3"	—	100	50	50	50	50	50	25	25	25	10	A.O	A.O.	3"
3 1/2"	—	100	50	50	50	50	25	25	25	25	10	A.O.	A.O.	3 1/2"
3 3/4"	—	—	—	—	50	50	—	25	25	—	—	—	—	3 1/4"
4"	—	100	50	50	50	50	25	25	25	25	10	A.O.	A.O.	4"
4 1/2"	—	—	—	50	50	50	25	25	25	10	10	A.O.	A.O.	4 1/2"
5"	—	—	—	50	—	25	25	25	10	10	10	A.O.	A.O.	5"
5 1/2"	—	—	—	50	—	25	25	25	10	10	10	A.O.	A.O.	5 1/2"
6"	—	—	—	50	—	25	25	25	10	10	10	A.O.	A.O.	6"
6 1/2"	—	—	—	—	—	—	—	25	10	10	A.O.	—	—	6 1/2"
7"	—	—	—	—	—	—	—	25	10	10	A.O.	—	—	7"
7 1/2"	—	—	—	—	—	—	—	25	10	10	A.O.	—	—	7 1/2"
8"	—	—	—	—	—	—	—	25	10	10	A.O.	—	—	8"
8 1/2"	—	—	—	—	—	—	—	25	10	10	A.O.	—	—	8 1/2"
9"	—	—	—	—	—	—	—	25	10	10	A.O.	—	—	9"

SET SCREWS — STAINLESS STEEL HEXAGON HEAD

WHITWORTH THREAD. Grades 303, 304, 305. Other Grades can be Supplied.



1/4" Diameter		5/16" Diameter		3/8" Diameter		1/2" Diameter		5/8" Diameter		3/4" Diameter	
Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack
3/8"	100	3/4"	100	3/4"	100	—	—	—	—	—	—
1"	100	1"	100	1"	100	1"	75	—	—	—	—
1 1/4"	100	1 1/4"	100	1 1/4"	100	1 1/4"	75	—	—	—	—
1 1/2"	100	1 1/2"	100	1 1/2"	100	1 1/2"	75	1 1/2"	25	1 1/2"	20
1 3/4"	100	1 3/4"	100	1 1/2"	100	1 3/4"	75	1 1/4"	25	1 1/4"	20
2"	100	2"	100	2"	100	2"	50	2"	25	2"	20
2 1/4"	100	2 1/4"	100	2 1/4"	100	2 1/4"	50	2 1/4"	25	2 1/4"	20
2 1/2"	100	2 1/2"	100	2 1/2"	100	2 1/2"	50	2 1/2"	25	2 1/2"	20
2 3/4"	100	2 1/4"	100	2 3/4"	100	2 3/4"	25	2 1/4"	25	2 1/4"	20
3"	100	3"	100	3"	100	3"	25	3"	25	3"	10
3 1/2"	100	3 1/2"	100	3 1/2"	100	3 1/2"	25	3 1/2"	25	3 1/2"	10
4"	100	4"	100	4"	100	4"	25	4"	25	4"	10

SET SCREWS — BRASS HEXAGON HEAD

WHITWORTH STANDARD

3/16" Diam.	1/4" Diam.	5/16" Diam.	3/8" Diam.	7/16" Diam.	1/2" Diam.	5/8" Diam.	3/4" Diam.
Length	Length	Length	Length	Length	Length	Length	Length
1/2"	1/2"	1/2"	1/2"	—	—	—	—
5/8"	5/8"	5/8"	5/8"	—	—	—	—
3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	—	—
7/8"	7/8"	7/8"	7/8"	—	—	—	—
1"	1"	1"	1"	1"	1"	1"	1"
1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
1 3/4"	1 3/4"	1 3/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/4"
2"	2"	2"	2"	2"	2"	2"	2"
—	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"
—	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
—	—	—	—	—	—	2 1/4"	2 3/4"
—	3"	3"	3"	3"	3"	3"	3"
—	—	—	—	—	—	3 1/2"	3 1/2"
—	—	—	—	—	—	4"	4"

HIGH TENSILE HEXAGON SET SCREWS

U.N.F. AND U.N.C. THREADS

Lengths	1/4"	5/16"	3/8"	7/16"	1/2"
	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack
1/4"	150	150	150	150	—
1"	150	150	150	150	75
1 1/4"	150	150	150	150	75
1 1/2"	150	150	150	150	75
1 3/4"	150	150	150	75	75
2"	150	150	150	75	75

SET SCREWS — BRIGHT STEEL HEXAGON HEAD

UNIFIED U.N.F. AND U.N.C. THREAD

Diameter ▶	3/16″	1/4″	5/16″	3/8″	7/16″	1/2″	9/16″	5/8″	3/4″	◀ Diameter
Length	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Length
1/4″	100	100	100	100	—	—	—	—	—	1/4″
5/16″	100	100	100	100	—	—	—	—	—	5/16″
3/8″	100	100	100	100	—	—	—	—	—	3/8″
1/2″	100	100	100	100	100	100	50	50	—	1/2″
1″	100	100	100	100	100	100	50	50	25	1″
1 1/4″	100	100	100	100	100	50	50	50	25	1 1/4″
1 1/2″	100	100	100	100	100	50	50	50	25	1 1/2″
1 3/4″	100	100	100	100	100	50	50	50	25	1 3/4″
2″	100	100	100	100	100	50	50	50	25	2″
2 1/4″	—	100	100	50	50	50	—	50	25	2 1/4″
2 1/2″	—	100	100	50	50	50	50	50	25	2 1/2″
2 3/4″	—	—	50	—	—	—	—	25	25	2 3/4″
3″	—	100	50	50	50	50	50	25	25	3″
3 1/2″	—	100	50	50	50	50	25	25	25	3 1/2″
4″	—	100	50	50	50	50	25	25	25	4″

SET SCREWS — BRIGHT STEEL HEXAGON HEAD

B.S.F. THREAD

Diameter ▶	3/16″	1/4″	5/16″	3/8″	7/16″	1/2″	5/8″	3/4″	◀ Diameter
Length	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Standard Pack	Length
1/4″	—	100	—	—	—	—	—	—	1/4″
5/16″	100	100	100	100	—	—	—	—	5/16″
3/8″	100	100	100	100	—	—	—	—	3/8″
1/2″	100	100	100	100	—	—	—	—	1/2″
5/8″	100	100	100	100	—	—	—	—	5/8″
1″	100	100	100	100	100	100	50	—	1″
1 1/4″	100	100	100	100	100	100	50	—	1 1/4″
1 1/2″	100	100	100	100	100	50	50	25	1 1/2″
1 3/4″	100	100	100	100	100	50	50	25	1 3/4″
2″	100	100	100	100	100	50	50	25	2″
2 1/4″	—	—	100	50	50	50	50	25	2 1/4″
2 1/2″	—	100	100	50	50	50	50	25	2 1/2″
2 3/4″	—	—	50	50	50	50	25	25	2 3/4″
3″	—	100	50	50	50	50	25	25	3″
3 1/2″	—	—	—	50	50	50	25	25	3 1/2″
4″	—	—	—	50	50	50	25	25	4″

SET SCREWS — BLACK STEEL OR GALVANISED

WHITWORTH THREAD

1/4″ Diam.		5/16″ Diam.		3/8″ Diam.		7/16″ Diam.		1/2″ Diam.		5/8″ Diam.		3/4″ Diam.		7/8″ Diam.		1″ Diam.	
Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack
1/4″	150	1/2″	150	1/2″	150	—	—	—	—	—	—	—	—	—	—	—	—
3/8″	150	5/8″	150	5/8″	150	—	—	—	—	—	—	—	—	—	—	—	—
1/2″	150	3/4″	150	3/4″	150	1/2″	75	3/4″	75	—	—	—	—	—	—	—	—
1″	150	1″	150	1″	150	1″	75	1″	75	1″	50	—	—	—	—	—	—
1 1/4″	150	1 1/4″	150	1 1/4″	150	1 1/4″	75	1 1/4″	75	1 1/4″	50	1 1/4″	25	—	—	—	—
1 1/2″	150	1 1/2″	150	1 1/2″	150	1 1/2″	75	1 1/2″	75	1 1/2″	50	1 1/2″	25	1 1/2″	20	1 1/2″	10
1 3/4″	150	1 3/4″	150	1 3/4″	150	1 3/4″	75	1 3/4″	75	1 3/4″	50	1 3/4″	25	1 3/4″	20	1 3/4″	10
2″	150	2″	150	2″	150	2″	75	2″	75	2″	50	2″	25	2″	20	2″	10
2 1/2″	150	2 1/2″	150	2 1/2″	150	2 1/2″	75	2 1/2″	75	2 1/2″	25	2 1/2″	20	2 1/2″	10	2 1/2″	10
3″	150	3″	150	3″	150	3″	75	3″	75	3″	25	3″	20	3″	10	3″	10
—	—	—	—	3 1/2″	75	—	—	3 1/2″	50	3 1/2″	25	3 1/2″	20	3 1/2″	10	3 1/2″	10
—	—	—	—	4″	75	—	—	4″	50	4″	25	4″	20	4″	10	4″	10
—	—	—	—	—	—	—	—	4 1/2″	25	4 1/2″	10	4 1/2″	10	4 1/2″	10	4 1/2″	10
—	—	—	—	—	—	—	—	5″	25	5″	10	5″	10	5″	10	5″	10
—	—	—	—	—	—	—	—	5 1/2″	25	5 1/2″	10	5 1/2″	10	5 1/2″	10	5 1/2″	10
—	—	—	—	—	—	—	—	6″	25	6″	10	6″	10	6″	10	6″	10

HEXAGON BOLTS AND NUTS, BLACK STEEL OR GALVANISED

WHITWORTH THREAD — HEXAGON HEAD, ROUND SHANK, HEXAGON NUT

1/4" Diameter		5/16" Diameter		3/8" Diameter		7/16" Diameter		1/2" Diameter		5/8" Diameter		3/4" Diameter		7/8" Diameter		1" Diameter	
Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack.	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack
3/4"	150	3/4"	150	3/4"	150	1"	100	1"	600	1"	300	—	—	—	—	—	—
1"	150	1"	150	1"	150	1 1/4"	100	1 1/4"	600	1 1/4"	300	1 1/4"	200	—	—	—	—
1 1/4"	150	1 1/4"	150	1 1/4"	150	1 1/2"	100	1 1/2"	500	1 1/2"	300	1 1/2"	200	1 1/2"	150	—	—
1 1/2"	150	1 1/2"	150	1 1/2"	150	1 3/4"	100	1 3/4"	500	1 3/4"	250	1 3/4"	175	1 3/4"	150	1 3/4"	100
1 3/4"	150	1 3/4"	150	1 3/4"	100	2"	75	2"	500	2"	250	2"	175	2"	150	2"	100
2"	150	2"	150	2"	100	2 1/4"	75	2 1/4"	500	2 1/4"	250	2 1/4"	150	2 1/4"	125	2 1/4"	100
2 1/4"	150	2 1/4"	150	2 1/4"	100	2 1/2"	75	2 1/2"	400	2 1/2"	250	2 1/2"	150	2 1/2"	125	2 1/2"	75
2 1/2"	150	2 1/2"	150	2 1/2"	100	2 3/4"	75	2 3/4"	400	2 3/4"	200	2 3/4"	150	2 3/4"	125	2 3/4"	75
2 3/4"	150	2 3/4"	100	2 3/4"	100	3"	75	3"	400	3"	200	3"	150	3"	100	3"	75
3"	150	3"	100	3"	100	-	-	3 1/4"	350	3 1/4"	200	3 1/4"	125	3 1/4"	100	3 1/4"	75
3 1/4"	150	—	—	—	—	3 1/2"	400	3 1/2"	350	3 1/2"	200	3 1/2"	125	3 1/2"	100	3 1/2"	75
3 1/2"	150	3 1/2"	100	3 1/2"	75	-	—	3 3/4"	350	3 3/4"	200	3 3/4"	125	3 3/4"	100	3 3/4"	75
3 3/4"	150	—	—	—	—	4"	400	4"	300	4"	200	4"	125	4"	100	4"	75
4"	150	4"	100	4"	75	4 1/2"	400	4 1/2"	300	4 1/2"	150	4 1/2"	100	4 1/2"	75	4 1/2"	50
4 1/2"	100	4 1/2"	100	4 1/2"	500	5"	400	5"	250	5"	150	5"	100	5"	75	5"	50
5"	100	5"	100	5"	500	5 1/2"	300	5 1/2"	250	5 1/2"	150	5 1/2"	100	5 1/2"	75	5 1/2"	50
5 1/2"	100	5 1/2"	100	5 1/2"	500	6"	300	6"	250	6"	150	6"	100	6"	75	6"	50
6"	100	6"	100	6"	500	-	—	6 1/2"	200	6 1/2"	125	6 1/2"	100	6 1/2"	75	6 1/2"	50
—	—	—	—	6 1/2"	400	—	—	7"	200	7"	125	7"	75	7"	75"	7"	50
—	—	—	—	7"	400	—	—	7 1/2"	200	7 1/2"	125	7 1/2"	75	7 1/2"	50	7 1/2"	50
—	—	—	—	7 1/2"	400	—	—	8"	200	8"	100	8"	75	8"	50	8"	40
—	—	—	—	8"	400	—	—	8 1/2"	175	8 1/2"	100	8 1/2"	75	8 1/2"	50	8 1/2"	40
—	—	—	—	8 1/2"	300	—	—	9"	175	9"	100	9"	75	9"	50	9"	40
—	—	—	—	9"	300	—	—	9 1/2"	150	9 1/2"	100	9 1/2"	75	9 1/2"	50	9 1/2"	40
—	—	—	—	9 1/2"	300	—	—	10"	150	10"	100	10"	50	10"	50	10"	40
—	—	—	—	10"	300	—	—	10 1/2"	150	10 1/2"	100	10 1/2"	50	10 1/2"	50	10 1/2"	25
—	—	—	—	10 1/2"	300	—	—	11"	150	11"	100	11"	50	11"	50	11"	25
—	—	—	—	11"	300	—	—	11 1/2"	150	11 1/2"	75	11 1/2"	50	11 1/2"	40	11 1/2"	25
—	—	—	—	11 1/2"	250	-	—	12"	125	12"	75	12"	50	12"	40	12"	25
—	—	—	—	12"	250	—	—	13"	125	13"	75	13"	50	13"	40	13"	25
—	—	—	—	—	—	—	—	14"	125	14"	75	14"	50	14"	40	14"	25
—	—	—	—	—	—	—	—	15"	100	15"	75	15"	50	15"	25	15"	25
—	—	—	—	—	—	—	—	16"	100	16"	75	16"	40	16"	25	16"	25
—	—	—	—	—	—	—	—	17"	100	17"	50	17"	40	17"	25	17"	25
—	—	—	—	—	—	—	—	18"	100	18"	50	18"	40	18"	25	18"	25
—	—	—	—	—	—	—	—	19"	100	19"	50	19"	40	19"	25	19"	25
—	—	—	—	—	—	—	—	20"	100	20"	50	20"	40	20"	25	20"	20
—	—	—	—	—	—	—	—	—	—	21"	50	21"	25	21"	25	21"	20
—	—	—	—	—	—	—	—	—	—	22"	50	22"	25	22"	25	22"	20
—	—	—	—	—	—	—	—	—	—	23"	50	23"	25	23"	25	23"	20
—	—	—	—	—	—	—	—	—	—	24"	50	24"	25	24"	25	24"	20

1 1/8", 1 1/4", 1 3/8", 1 1/2" DIAMETER
BOLTS AND NUTS
Now available from stock

SQUARE HEAD BOLTS AND NUTS, BLACK STEEL OR GALVANISED

WHITWORTH THREAD — SQUARE HEAD, ROUND SHANK, SQUARE NUT

1/2" Diameter		5/8" Diameter		3/4" Diameter		7/8" Diameter		1" Diameter		1/2" Diameter		5/8" Diameter		3/4" Diameter		7/8" Diameter		1" Diameter	
Lgth.	Std. Pack	Lgth.	Std. Pack	Lgth.	Std. Pack	Lght.	Std. Pack	Lgth.	Std. Pack.	Lgth.	Std Pack	Lgth.	Std. Pack	Lgth.	Std. Pack	Lgth.	Std. Pack	Lgth.	Std. Pack.
1"	500	1 1/2"	250	—	—	—	—	—	—	10"	150	11"	75	10"	50	10"	50	10"	25
1 1/4"	500	1 3/4"	250	—	—	—	—	—	—	10 1/2"	150	11 1/2"	75	10 1/2"	50	10 1/2"	40	10 1/2"	25
1 1/2"	500	2"	250	1 1/2"	150	—	—	—	—	11"	150	12"	75	11"	50	11"	40	11"	25
1 3/4"	500	2 1/4"	250	1 3/4"	150	—	—	—	—	11 1/2"	150	13"	75	11 1/2"	50	11 1/2"	40	11 1/2"	25
2"	500	2 1/2"	200	2"	150	—	—	—	—	12"	150	14"	75	12"	50	12"	40	12"	25
2 1/4"	400	2 3/4"	200	2 1/4"	150	—	—	—	—	13"	100	15"	75	13"	50	13"	40	13"	25
2 1/2"	400	3"	200	2 1/2"	150	—	—	—	—	14"	100	16"	50	14"	50	14"	40	14"	25
2 3/4"	400	3 1/4"	200	2 3/4"	100	—	—	—	—	15"	100	17"	50	15"	50	15"	25	15"	25
3"	400	3 1/2"	200	3"	100	—	—	—	—	16"	100	18"	50	16"	40	16"	25	16"	25
3 1/4"	400	3 3/4"	150	3 1/4"	100	—	—	—	—	17"	100	19"	50	17"	40	17"	25	17"	25
3 1/2"	300	4"	150	3 1/2"	100	—	—	—	—	18"	100	20"	50	18"	40	18"	25	18"	25
3 3/4"	300	4 1/2"	150	3 3/4"	100	—	—	—	—	19"	100	21"	50	19"	40	19"	25	19"	25
4"	300	5"	150	4"	100	4"	75	—	—	20"	75	22"	50	20"	40	20"	25	20"	20
4 1/2"	300	5 1/2"	150	4 1/2"	100	4 1/2"	75	—	—	21"	75	23"	50	21"	25	21"	25	21"	20
5"	300	6"	150	5"	100	5"	75	—	—	22"	75	24"	50	22"	25	22"	25	22"	20
5 1/2"	250	6 1/2"	100	5 1/2"	100	5 1/2"	75	—	—	23"	75	—	—	23"	25	23"	25	23"	20
6"	250	7"	100	6"	75	6"	75	—	—	24"	75	—	—	24"	25	24"	20	24"	20
6 1/2"	200	7 1/2"	100	6 1/2"	75	6 1/2"	50	—	—	—	—	—	—	25"	25	25"	20	25"	15
7"	200	8"	100	7"	75	7"	50	—	—	—	—	—	—	26"	25	26"	20	26"	15
7 1/2"	200	8 1/2"	100	7 1/2"	75	7 1/2"	50	—	—	—	—	—	—	27"	25	27"	20	27"	15
8"	200	9"	100	8"	75	8"	50	—	—	—	—	—	—	28"	25	28"	20	28"	15
8 1/2"	200	9 1/2"	100	8 1/2"	75	8 1/2"	50	—	—	—	—	—	—	29"	25	29"	20	29"	15
9"	175	10"	100	9"	75	9"	50	—	—	—	—	—	—	30"	25	30"	20	30"	15
9 1/2"	175	10 1/2"	100	9 1/2"	50	9 1/2"	50	—	—										

CUP HEAD OR CARRIAGE BOLTS AND NUTS
BLACK STEEL OR GALVANISED

WHITWORTH THREAD — CUP HEAD, SQUARE NECK, ROUND SHANK, SQUARE NUT

3/16" Diameter		1/4" Diameter		5/16" Diameter		3/8" Diameter		7/16" Diameter		1/2" Diameter		5/8" Diameter		3/4" Diameter	
Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack	Length	Std. Pack
3/4"	150	3/4"	150	3/4"	150	3/4"	150	3/4"	100	—	—	—	—	—	—
1"	150	1"	150	1"	150	1"	150	1"	100	1"	600	—	—	—	—
1 1/4"	150	1 1/4"	150	1 1/4"	150	1 1/4"	150	1 1/4"	100	1 1/4"	600	1 1/4"	300	—	—
1 1/2"	150	1 1/2"	150	1 1/2"	150	1 1/2"	150	1 1/2"	100	1 1/2"	600	1 1/2"	300	1 1/2"	200
1 3/4"	150	1 3/4"	150	1 3/4"	150	1 3/4"	100	1 3/4"	100	1 3/4"	500	1 3/4"	300	1 3/4"	200
2"	150	2"	150	2"	150	2"	100	2"	75	2"	500	2"	300	2"	200
2 1/4"	150	2 1/4"	150	2 1/4"	150	2 1/4"	100	2 1/4"	75	2 1/4"	500	2 1/4"	250	2 1/4"	150
2 1/2"	150	2 1/2"	150	2 1/2"	150	2 1/2"	100	2 1/2"	75	2 1/4"	400	2 1/2"	250	2 1/2"	150
2 3/4"	150	2 3/4"	150	2 3/4"	100	2 3/4"	100	2 3/4"	75	2 3/4	400	2 3/4"	250	2 3/4"	150
3"	150	3"	150	3"	100	3"	100	3"	75	3"	400	3"	200	3"	150
3 1/4"	140	3 1/4"	150	3 1/4"	100	3 1/4"	100	3 1/4"	75	3 1/4"	400	3 1/4"	200	3 1/4"	150
3 1/2"	150	3 1/2"	150	3 1/2"	100	3 1/2"	100	3 1/2"	75	3 1/2"	350	3 1/2"	200	3 1/2"	125
3 3/4"	150	3 3/4"	150	3 3/4"	100	3 3/4"	75	—	—	3 3/4"	350	3 3/4"	200	3 3/4"	125
4"	150	4"	150	4"	100	4"	75	4"	400	4"	300	4"	175	4"	125
4 1/2"	150	4 1/2"	100	4 1/2"	100	4 1/2"	75	4 1/2"	400	4 1/2"	300	4 1/2"	175	4 1/2"	125
5"	150	5"	100	5"	100	5"	75	5"	400	5"	300	5"	175	5"	100
5 1/2"	150	5 1/2"	100	5 1/2"	100	5 1/2"	75	5 1/2"	300	5 1/2"	250	5 1/2"	150	5 1/2"	100
6"	150	6"	100	6"	100	6"	75	6"	300	6"	250	6"	150	6"	100
—	—	6 1/2"	50	6 1/2"	50	6 1/2"	400	6 1/2"	300	6 1/2	250	6 1/2"	125	6 1/2"	100
—	—	7"	50	7"	50	7"	400	7"	300	7"	200	7"	125	7"	75
—	—	7 1/2"	50	7 1/2"	50	7 1/2"	400	7 1/2"	300	7 1/2"	200	7 1/2"	125	7 1/2"	75
—	—	8"	50	8"	50	8"	400	8"	250	8"	200	8"	100	8"	75
—	—	—	—	—	—	8 1/2"	300	8 1/2"	250	8 1/2"	200	8 1/2"	100	8 1/2"	75
—	—	—	—	—	—	9"	300	9"	250	9"	150	9"	100	9"	75
—	—	—	—	—	—	9 1/2"	300	9 1/2"	200	9 1/2"	150	9 1/2"	100	9 1/2"	75
—	—	—	—	—	—	10"	300	10"	200	10"	150	10"	100	10"	50
—	—	—	—	—	—	10 1/2"	300	10 1/2"	200	10 1/2"	150	10 1/2"	100	10 1/2"	50
—	—	—	—	—	—	11"	300	11"	200	11"	150	11"	100	11"	50
—	—	—	—	—	—	11 1/2"	250	11 1/2"	200	11 1/2"	150	11 1/2"	75	11 1/2"	50
—	—	—	—	—	—	12"	250	12"	200	12"	125	12"	75	12"	50
—	—	—	—	—	—	13"	250	—	—	13"	125	13"	75	13"	50
—	—	—	—	—	—	14"	200	—	—	14"	125	14"	75	14"	50
—	—	—	—	—	—	15"	200	—	—	15"	100	15"	75	15"	50
—	—	—	—	—	—	16"	200	—	—	16"	100	16"	75	16"	40
—	—	—	—	—	—	17"	200	—	—	17"	100	17"	50	17"	40
—	—	—	—	—	—	18"	200	—	—	18"	100	18"	50	18"	40
—	—	—	—	—	—	19"	150	—	—	19"	100	19"	50	19"	40
—	—	—	—	—	—	20"	150	—	—	20"	75	20"	50	20"	40
—	—	—	—	—	—	21"	150	—	—	21"	75	21"	50	21"	40
—	—	—	—	—	—	22"	150	—	—	22"	75	22"	50	22"	25
—	—	—	—	—	—	23"	150	—	—	23"	75	23"	50	23"	25
—	—	—	—	—	—	24"	150	—	—	24"	75	24"	50	24"	25

CUP HEAD BOLTS — BRASS

Diameters	1/4"	5/16"	3/8"	1/2"
Length	1" 1 1/2" 2" 2 1/2" 3" 3 1/2" 4" 4 1/2" 5" 5 1/2" 6"			

COUNTERSUNK HEAD BOLTS AND NUTS — BLACK STEEL

WHITWORTH THREAD

No. 3 Plow Bolts (included angle 94°)

Countersunk Head, Square Neck, Hexagon Nut

Length	3/8" Diameter	7/16" Diameter	1/2" Diameter	5/8" Diameter
1"	100	100	100	—
1 1/4"	100	100	100	—
1 1/2"	100	100	50	—
1 3/4"	100	100	50	50
2"	100	50	50	50
2 1/2"	100	50	50	25
3"	100	50	50	25
3 1/2"	—	—	—	25

Non Standard Bolts with Forged Head to special dimensions can be supplied.

CSK HEAD ROUND NECK No. 6
CSK HEAD NIB NECK No. 7

HEXAGON NUTS

	1/2" Diam.	5/8" Diameter	3/4" Diameter	7/8" Diameter	1" Diameter
Length	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack
1 1/2"	600	300	200	—	—
1 1/2"	600	300	200	—	—
1 3/4"	500	300	200	—	—
2"	500	300	200	—	—
2 1/2"	400	250	150	—	—
3"	400	200	150	100	—
3 1/2"	350	200	125	100	—
4"	300	175	125	100	75
4 1/2"	300	175	125	75	50
5"	300	175	100	75	50
5 1/2"	250	150	—	—	50
6"	250	150	—	—	50

WASHERS

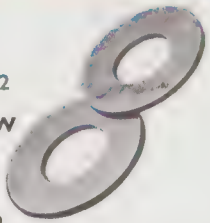
L452 STEEL — FLAT BRIGHT
Bolt Size $\frac{1}{8}$″ $\frac{3}{16}$″ $\frac{1}{4}$″ $\frac{5}{16}$″ $\frac{3}{8}$″ $\frac{7}{16}$″ $\frac{1}{2}$″ $\frac{9}{16}$″ $\frac{5}{8}$″ $\frac{3}{4}$″ $\frac{7}{8}$″ 1″
OBA 1BA 2BA 3BA 4BA 5BA 6BA
7BA 8BA 9BA 10BA

L453 STAINLESS STEEL
Bolt Size $\frac{3}{16}$″ $\frac{1}{4}$″ $\frac{5}{16}$″ $\frac{3}{8}$″ $\frac{7}{16}$″ $\frac{1}{2}$″ $\frac{5}{8}$″ $\frac{3}{4}$″ $\frac{7}{8}$″ 1″

L454 BRASS FLAT
Bolt Size $\frac{1}{8}$″ to 1″ OB - 10BA

L455 STEEL ROUND
— BLACK OR GALVANISED

Bolt Size	Outside Diameter	Inside Diameter	Approximate Thickness	Count per cwt. Black
$\frac{3}{16}$″	$\frac{9}{16}$″	$\frac{7}{32}$″	$\frac{3}{64}$″	44,128
$\frac{1}{4}$″	$\frac{5}{8}$″	$\frac{9}{32}$″	$\frac{1}{16}$″	17,472
$\frac{5}{16}$″	$\frac{7}{8}$″	$\frac{3}{8}$″	$\frac{1}{16}$″	12,600
$\frac{3}{8}$″	1″	$\frac{7}{16}$″	$\frac{3}{64}$″	7,840
$\frac{7}{16}$″	$1\frac{1}{4}$″	$\frac{1}{2}$″	$\frac{3}{64}$″	4,648
$\frac{1}{2}$″	$1\frac{1}{4}$″	$\frac{9}{16}$″	$\frac{3}{32}$″	3,920
$\frac{5}{8}$″	$1\frac{1}{2}$″	$1\frac{1}{16}$″	$\frac{3}{32}$″	2,688
$\frac{3}{4}$″	$1\frac{3}{4}$″	$1\frac{3}{16}$″	$\frac{1}{8}$″	1,680
$\frac{7}{8}$″	2″	$1\frac{5}{16}$″	$\frac{1}{8}$″	1,232
1″	$2\frac{1}{4}$″	$1\frac{7}{16}$″	$\frac{1}{8}$″	952
$1\frac{1}{4}$″	$2\frac{3}{4}$″	$1\frac{7}{16}$″	$\frac{11}{64}$″	577
$1\frac{1}{2}$″	$2\frac{3}{4}$″	$1\frac{7}{16}$″	$\frac{11}{64}$″	471
$1\frac{3}{4}$″	3″	$1\frac{7}{16}$″	$\frac{3}{16}$″	364
$1\frac{1}{4}$″	$3\frac{1}{4}$″	$1\frac{7}{16}$″	$\frac{3}{16}$″	314
$1\frac{1}{8}$″	$3\frac{1}{4}$″	$1\frac{11}{16}$″	$\frac{3}{16}$″	287
$1\frac{1}{2}$″	$3\frac{3}{4}$″	$1\frac{13}{16}$″	$\frac{3}{16}$″	252
$1\frac{5}{8}$″	4″	$1\frac{13}{16}$″	$\frac{13}{64}$″	208
2″	$4\frac{1}{4}$″	$2\frac{1}{16}$″	$\frac{13}{64}$″	191
$2\frac{1}{2}$″	6″	$2\frac{3}{4}$″	$\frac{1}{4}$″	—
3″	6″	$3\frac{1}{4}$″	$\frac{1}{8}$″	—



L456 CUP — Nickel Plates Finish
To suit screw gauges 6, 8, 10, 12

L457 LEAD — ROOFING SCREW
I.D. $\frac{1}{4}$″

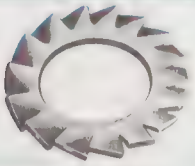
L458 SQUARE STEEL
BLACK OR GALVANISED

Bolt Size	Square Size	Hole Diameter	Thickness	Count per cwt.
$\frac{3}{8}$″	$1\frac{1}{2}$″	$\frac{7}{16}$″	$\frac{1}{8}$″	1,493
$\frac{1}{2}$″	$1\frac{1}{2}$″	$\frac{9}{16}$″	$\frac{1}{8}$″	1,534
$\frac{5}{8}$″	2″	$\frac{11}{16}$″	$\frac{3}{16}$″	589
$\frac{3}{4}$″	$2\frac{1}{2}$″	$\frac{13}{16}$″	$\frac{3}{16}$″	373
$\frac{1}{2}$″	3″	$\frac{13}{16}$″	$\frac{1}{4}$″	193
$\frac{7}{8}$″	$2\frac{1}{2}$″	$\frac{15}{16}$″	$\frac{3}{16}$″	256
$\frac{7}{8}$″	3″	$\frac{15}{16}$″	$\frac{1}{4}$″	195
1″	3″	$1\frac{1}{8}$″	$\frac{1}{4}$″	202
$1\frac{1}{4}$″	3″	$1\frac{1}{8}$″	$\frac{1}{4}$″	204
$1\frac{1}{4}$″	3″	$1\frac{1}{8}$″	$\frac{1}{4}$″	212
$1\frac{1}{2}$″	3″	$1\frac{1}{8}$″	$\frac{1}{4}$″	230

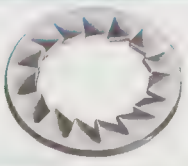
L459 TAPERED MALLEABLE IRON
"D" INCLUDED ANGLE —
BLACK OR GALVANISED.

Bolt Size	Width	Mean Thickness	Count per cwt.
$\frac{3}{8}$″	$\frac{33}{64}$″	$\frac{1}{8}$″	6,150
$\frac{1}{2}$″	1″	$\frac{1}{8}$″	3,660
$\frac{5}{8}$″	$1\frac{1}{2}$″	$\frac{3}{64}$″	2,820
$\frac{3}{4}$″	$1\frac{1}{2}$″	$\frac{3}{32}$″	1,800
$\frac{7}{8}$″	$1\frac{33}{64}$″	$\frac{11}{64}$″	1,600
1″	$1\frac{1}{2}$″	$\frac{3}{16}$″	1,200

FAN DISC LOCK WASHERS



L460 EXTERNAL



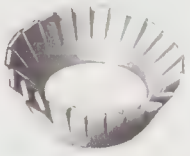
L461 INTERNAL

Bolt Size	Internal Diam.	External Diam.	Thickness
10 BA	.072″	.175″	.012″
8 BA	.092″	.200″	.012″
6 BA and $\frac{7}{64}$″	.115″	.218″	.018″
5 BA and $\frac{1}{8}$″	.130″	.236″	.018″
4 BA	.150″	.275″	.018″
3 BA and $\frac{5}{32}$″	.169″	.315″	.024″
2 BA and $\frac{3}{16}$″	.195″	.354″	.024″
	.209″	.354″	.024″
1 BA and $\frac{7}{32}$″	.225″	.394″	.024″
0 BA	.248″	.433″	.028″
$\frac{1}{4}$″	.260″	.433″	.028″
$\frac{5}{16}$″	.323″	.536″	.032″
$\frac{3}{8}$″	.387″	.669″	.036″
$\frac{7}{16}$″	.453″	.748″	.040″
$\frac{1}{2}$″	.520″	.866″	.040″
$\frac{9}{16}$″	.577″	1.000″	.040″
$\frac{5}{8}$″	.640	1.062″	.048″
$\frac{11}{16}$″	.072″	1.238″	.064″
$\frac{3}{4}$″	.772″	1.260″	.064″
$\frac{7}{8}$″	.895″	1.401″	.064″
1″	1.032″	1.811″	.080″
$1\frac{1}{8}$″	1.162″	1.811″	.080″
$1\frac{1}{4}$″	1.270″	1.960″	.080″
$1\frac{3}{8}$″	1.395″	2.005″	.080″

To obtain the maximum efficiency of Fan Disc Lock Washers, the teeth of either type must be completely covered by bolt head or nut. Therefore use:

EXTERNAL TEETH
with Standard full-size Whitworth Bolts and Nuts.

INTERNAL TEETH
with Auto-Whitworth, B.S.F., High Tensile all other types of Bolts and Nuts having small heads and nuts.



L462
COUNTERSUNK TYPE

Bolt Size	Internal Diam.	External Diam.	Thickness
5 BA and $\frac{1}{8}$″	.126″	.236″	.010″
4 BA	.146″	.275″	.010″
3 BA and $\frac{5}{32}$″	.165″	.315″	.010″
2 BA and $\frac{3}{16}$″	.197″	.374″	.010″
OBA and $\frac{1}{4}$″	.256″	.472″	.010″
$\frac{5}{16}$″	.323″	.661″	.012″
$\frac{3}{8}$″	.385″	.669″	.015″
$\frac{1}{2}$″	.516″	.984″	.020″
$\frac{5}{8}$″	.635″	1.181″	.028″
$\frac{3}{4}$″	.760″	1.325″	.028″

L463

FIBRE WASHERS

$\frac{1}{32}$″ Thick
1 Gross packets

Inside Diameter	Outside Diameter
$\frac{3}{32}$″	$\frac{1}{4}$″
$\frac{1}{8}$″	$\frac{5}{16}$″
$\frac{5}{32}$″	$\frac{3}{8}$″
$\frac{3}{16}$″	$\frac{7}{16}$″
$\frac{7}{32}$″	$\frac{1}{2}$″
$\frac{1}{4}$″	$\frac{9}{16}$″
$\frac{9}{32}$″	$\frac{5}{8}$″
$\frac{5}{16}$″	$\frac{11}{16}$″
$\frac{3}{8}$″	$\frac{3}{4}$″
$\frac{7}{16}$″	$\frac{13}{16}$″
$\frac{1}{2}$″	$\frac{7}{8}$″
$\frac{9}{16}$″	$\frac{15}{16}$″
$\frac{5}{8}$″	1″
$\frac{11}{16}$″	$1\frac{1}{16}$″
$\frac{3}{4}$″	$1\frac{1}{8}$″
$\frac{13}{16}$″	$1\frac{3}{16}$″
$\frac{7}{8}$″	$1\frac{1}{4}$″
1″	$1\frac{1}{2}$″
$1\frac{1}{16}$″	$1\frac{3}{4}$″
$1\frac{1}{8}$″	$1\frac{3}{4}$″
$1\frac{1}{4}$″	2″
$1\frac{3}{8}$″	$2\frac{1}{4}$″
$1\frac{1}{2}$″	$2\frac{1}{4}$″

SPRING LOCK WASHERS

L464 A.S.A. LIGHT

L465 A.S.A. MEDIUM

L466 A.S.A. HEAVY

L467 STANDARD SQUARE SECTION

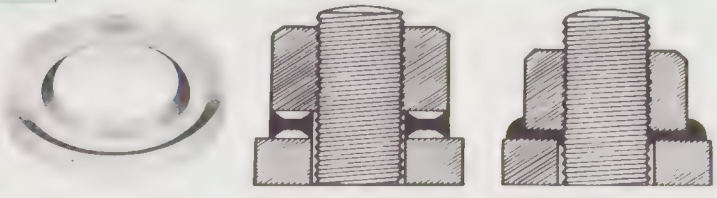
Packed 150 per Carton or Bulk

BLACK STEEL, ZINC PLATED OR GALVANISED · STAINLESS STEEL

Bolt Size	Type of Washer	Approx. Weight per 1,000 in lbs.	Steel Section Width	Steel Section Thickness	Fractional Size
6BA	A.S.A. Light	.12	.035″	.020″	1/32″ × 1/64″
	A.S.A. Medium	.15	.040″	.025″	3/64″ × 1/32″
1/8″	Standard Square Section	.30	.046″	.046″	3/64″ × 3/64″
	A.S.A. Light	.18	.040″	.025″	3/64″ × 1/32″
	A.S.A. Medium	.25	.047″	.031″	3/64″ × 1/32″
4BA	A.S.A. Light	.20	.040″	.025″	3/64″ × 1/32″
	A.S.A. Medium	.27	.047″	.031″	3/64″ × 1/32″
5/32″	Standard Square Section	.50	.046″	.046″	3/64″ × 3/64″
	A.S.A. Light	.34	.047″	.031″	3/64″ × 1/32″
	A.S.A. Medium	.50	.055″	.040″	1/16″ × 3/64″
3/16″	Standard Square Section	.55	.046″	.046″	3/64″ × 3/64″
	A.S.A. Light	.55	.055″	.040″	1/16″ × 3/64″
	A.S.A. Medium	.70	.062″	.047″	1/16″ × 3/64″
	A.S.A. Heavy	.92	.070″	.056″	3/64″ × 1/16″
7/32″	A.S.A. Medium Duty	1.00	.070″	.056″	5/64″ × 1/16″
	A.S.A. Medium Duty	1.10	.070″	.056″	5/64″ × 1/16″
1/4″	Standard Square Section	1.084	1/16″	1/16″	1/16″ × 1/16″
	A.S.A. Light	1.80	.107″	.047″	3/32″ × 1/64″
	A.S.A. Medium	2.20	.109″	.062″	3/32″ × 1/16″
	A.S.A. Heavy	2.90	.110″	.077″	7/64″ × 5/64″
9/32″	Standard Square Section	1.875	3/64″	3/64″	3/64″ × 3/64″
	A.S.A. Light	2.80	.117″	.056″	1/8″ × 1/16″
	A.S.A. Medium	3.80	.125″	.078″	1/8″ × 3/32″
	A.S.A. Heavy	5.00	.130″	.097″	9/64″ × 3/32″
5/16″	Standard Square Section	3.50	3/32″	3/32″	3/32″ × 3/32″
	A.S.A. Light	4.20	.136″	.070″	1/8″ × 1/16″
	A.S.A. Medium	6.00	.141″	.094″	1/8″ × 3/32″
	A.S.A. Heavy	7.70	.145″	.115″	5/32″ × 3/32″

Bolt Size	Type of Washer	Approx. Weight per 1,000 in lbs.	Steel Section Width	Steel Section Thickness	Fractional Size
7/16″	Standard Square Section	3.84	3/32″	3/32″	3/32″ × 3/32″
	A.S.A. Light	7.10	.154″	.085″	1/8″ × 3/32″
	A.S.A. Medium	9.00	.156″	.109″	5/32″ × 3/32″
	A.S.A. Heavy	11.50	.160″	.133″	1/8″ × 1/8″
1/2″	Standard Square Section	5.90	7/64″	7/64″	7/64″ × 7/64″
	A.S.A. Light	10.50	.170″	.099″	3/16″ × 3/32″
	A.S.A. Medium	12.90	.171″	.125″	3/16″ × 1/8″
	A.S.A. Heavy	16.40	.176″	.151″	3/16″ × 3/32″
5/8″	Standard Square Section	10.42	1/8″	1/8″	1/8″ × 1/8″
	A.S.A. Light	19.00	.201″	.126″	3/16″ × 1/8″
	A.S.A. Medium	24.00	.203″	.156″	7/32″ × 5/32″
	A.S.A. Heavy	31.50	.210″	.189″	7/32″ × 3/16″
3/4″	Standard Square Section	19.00	5/32″	5/32″	5/32″ × 5/32″
	A.S.A. Light	32.50	.233″	.153″	1/4″ × 5/32″
	A.S.A. Medium	39.50	.234″	.188″	1/4″ × 3/16″
	A.S.A. Heavy	51.70	.244″	.226″	1/4″ × 1/4″
7/8″	Standard Square Section	36.00	3/16″	3/16″	3/16″ × 3/16″
	A.S.A. Medium	59.50	.266″	.219″	1/4″ × 7/32″
1″	Standard Square Section	50.75	7/32″	7/32″	7/32″ × 7/32″
	A.S.A. Medium	88.00	.297″	.250″	5/16″ × 1/4″
1 1/8″	A.S.A. Medium	120.00	.328″	.281″	5/16″ × 9/32″
1 1/4″	A.S.A. Medium	166.00	.359″	.312″	3/8″ × 5/16″
1 3/8″	A.S.A. Medium	219.00	.391″	.344″	3/8″ × 3/8″
1 1/2″	A.S.A. Medium	282.00	.422″	.375″	7/16″ × 3/8″

L468 "DUBO" RETAINING RINGS



How "DUBO" Retaining Rings operate

When the "DUBO" Retaining Ring is placed on a bolt and the nut is tightened, the "DUBO" ring begins its cold flowing action. The inner rim grips into the threads at the bolt and nut and flows into the opening of the tapped hole. Simultaneously, the outer rim flows over the flats of the nut, thus securely locking and sealing the nut.
As the NYLON is forced into the screw threads of the nut and bolt, the danger of leakage along this junction is eliminated.

Bolt Size: 1/8″ 5/32″ 3/16″ 1/4″ 5/16″ 3/8″ 7/16″ 1/2″ 9/16″ 5/8″ 3/4″ 7/8″ 1″ 1 1/16″ 1 1/8″ 1 1/4″ 1 3/8″ 1 1/2″ 1 5/8″ 1 3/4″ 1 7/8″

SPECIAL FEATURES AND PROPERTIES OF "DUBO" RETAINING RINGS

Great resistance to wear.
Considerable shock absorbing properties.
Resistance to corrosion and chemical agents.
Form stable up 200°C.
Recommended working temperatures:
for Static Loads from —60°C. up to + 120°C.
for Dynamic Loads from —60°C. up to + 80°C.
Tensile strength over 10,000 lbs. per sq. inch.
Modulus of elasticity 360,000 lbs. per sq. inch.
Specific Gravity 1.13.

"DUBO" Lock rings have uniform locking torque and low installation torque, with no galling or seizing on mating threads. They may also be used for electrical insulation, or to help control electrolytic corrosion as an insulator between dissimilar metals.

MACHINED HEXAGON NUTS

STANDARD

BRIGHT STEEL — STAINLESS STEEL*

Whitworth Right Hand	1/8" 5/32" 3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 3/8" 1 1/2" 1 3/4" 2"
Left Hand	1/4" 5/16" 3/8" 7/16" 1/2" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 1/2"
B.S.F.	3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 5/8" 7/8" 1" 1 1/8" 1 1/4" 1 1/2" 2"
B.A.	0BA, 1BA, 2BA, 3BA, 4BA, 5BA, 6BA, 7BA, 8BA, 9BA, 10BA
U.N.F. U.N.C.	3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 1/2"
S.A.E.	1" only 14 TPI

BRASS

Whitworth	1/8" 5/32" 3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1"
B.S.F.	1/4" 5/16" 3/8" 1/2"
B.A.	0BA, 1BA, 2BA, 3BA, 4BA, 5BA, 6BA, 7BA, 8BA, 9BA, 10BA
U.N.C. U.N.F.	1/4" 5/16" 3/8" 1/2"
S.A.E.	1" only 14 TPI

LOCK

BRIGHT STEEL — STAINLESS STEEL*

Whitworth	3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 3/8" 1 1/2"
B.S.F.	3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/4" 1 1/2"
U.N.C. U.N.F.	3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1"
S.A.E.	1" only 14 TPI

BRASS

Whitworth	3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1"

CASTLE

BRIGHT STEEL

Whitworth	1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 3/8" 1 1/2" 1 3/4" 2"
B.S.F.	1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/4" 1 1/2"
U.N.C. U.N.F.	1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 11/16" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 1/2"
S.A.E.	1" only 14 TPI

SLOTTED

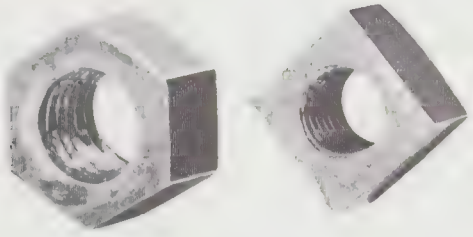
BRIGHT STEEL

Whitworth	1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 1/2"
B.S.F.	1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1"
U.N.C. U.N.F.	1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 1/2"
S.A.E.	1" only 14 TPI

* Whitworth Thread Standard Stock

BLACK STEEL NUTS

WHITWORTH THREAD



ALL BLACK STEEL NUTS CAN BE SUPPLIED GALVANISED OR ZINC PLATED

SQUARE		HEXAGON			
Bolt Size	Standard Pack	Bolt Size	Standard Pack	Bolt Size	Standard Pack
3/16"	150	3/16"	150	1 1/4"	150
1/4"	150	1/4"	150	1 3/8"	100
5/16"	150	5/16"	150	1 1/2"	100
3/8"	150	3/8"	150	1 5/8"	75
7/16"	150	7/16"	150	1 3/4"	60
1/2"	1800	1/2"	2000	2"	60
5/8"	900	5/8"	1100	2 1/4"	15
3/4"	500	3/4"	600	2 1/2"	12
7/8"	400	7/8"	500	2 3/4"	10
1"	300	1"	350	3"	10
1 1/8"	200	1 1/8"	250	—	—
1 1/4"	150	—	—	—	—
1 1/2"	75	—	—	—	—

NYLOC SELF-LOCKING NUTS

Standard Package 100

STANDARD

THIN

STANDARD and THIN

Whitworth	1/8" 3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 3/8" 1 1/2" 1 3/4" 2"
B.S.F.	3/16" 1/4" 5/8" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 3/8" 1 1/2" 1 3/4" 2"
B.A.	6BA 4BA 2BA
U.N.C. U.N.F.	3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 3/8" 1 1/2" 1 3/4" 2"

"CONELOK" NUTS

WHITWORTH

3/16" 1/4" 5/16" 3/8" 7/16" 1/2"

ACORN NUTS

BRASS
AND NICKEL PLATED

1/8" 5/32" 3/16" 1/4" 5/16" 3/8" 1/2" 5/8" 3/4"

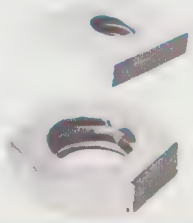
PRESSED NUTS

BRASS — Hexagon

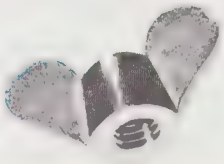
1/8" 5/32" 1/4" 5/16" 3/8"

STEEL — Hexagon and Square

1/8" 5/32" 1/4" 5/16" 3/8"



WING NUTS



BRASS
1/8" 5/32" 3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 5/8"

DIE CAST
3/16" 1/4" 5/16" 3/8" 1/2"

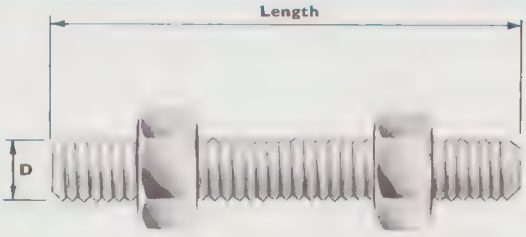
MALLEABLE IRON
5/32" 3/16" 1/4" 5/16" 3/8" 7/16" 1/2"

STAINLESS STEEL
3/16" 1/4" 5/16" 3/8"

Galvanising, or Electroplating in any finish, can be arranged to suit your requirements.

B7 PETRO-CHEMICAL STUDS

U.N.C. THREAD



Manufactured in strict accordance with BS1750 Part 1, Grade B7.

(ASTM Equivalent A193 Grade B7) and Australian Specification ASSB152-1956 Part 1 2H Nuts to BS1750 Part 2 (ASTM Equivalent A194 Grade 2H).

All Studs treated with rust preventative oil.

½" Diameter	⅝" Diameter	¾" Diameter	⅞" Diameter	1" Diameter	1⅛" Diameter	1¼" Diameter	1⅜" Diameter	1½" Diameter
Length	Length	Length	Length	Length	Length	Length	Length	Length
2"	—	—	—	—	—	—	—	—
2¼"	2¼"	2¼"	—	—	—	—	—	—
2½"	2½"	2½"	—	—	—	—	—	—
2¾"	2¾"	2¾"	—	—	—	—	—	—
3"	3"	3"	3"	3"	—	—	—	—
3¼"	3¼"	3¼"	3¼"	3¼"	—	—	—	—
3½"	3½"	3½"	3½"	3½"	3½"	—	—	—
3¾"	3¾"	3¾"	3¾"	3¾"	3¾"	—	—	—
4"	4"	4"	4"	4"	4"	—	—	—
4¼"	4¼"	4¼"	4¼"	4¼"	4¼"	4¼"	—	—
4½"	4½"	4½"	4½"	4½"	4½"	4½"	—	—
4¾"	4¾"	4¾"	4¾"	4¾"	4¾"	4¾"	—	—
5"	5"	5"	5"	5"	5"	5"	—	—
5¼"	5¼"	5¼"	5¼"	5¼"	5¼"	5¼"	—	—
5½"	5½"	5½"	5½"	5½"	5¼"	5½"	—	—
5¾"	5¾"	5¾"	5¾"	5¾"	5¾"	5¾"	—	—
6"	6"	6"	6"	6"	6"	6"	—	—
6¼"	6¼"	6¼"	6¼"	6¼"	6¼"	6¼"	—	—
6½"	6½"	6½"	6½"	6½"	6½"	6½"	—	—
6¾"	6¾"	6¾"	6¾"	6¾"	6¾"	6¾"	—	—
7"	7"	7"	7"	7"	7"	7"	—	—
7¼"	7¼"	7¼"	7¼"	7¼"	7¼"	7¼"	—	—
7½"	7½"	7½"	7½"	7½"	7½"	7½"	—	—
7¾"	7¾"	7¾"	7¾"	7¾"	7¾"	7¾"	—	—
8"	8"	8"	8"	8"	8"	8"	8"	8"
—	8¼"	8¼"	8¼"	8¼"	8¼"	8¼"	8¼"	8¼"
—	8½"	8½"	8½"	8½"	8½"	8½"	8½"	8½"
—	8¾"	8¾"	8¾"	8¾"	8¾"	8¾"	8¾"	8¾"
—	9"	9"	9"	9"	9"	9"	9"	9"
—	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"	9¼"
—	9½"	9½"	9½"	9½"	9½"	9½"	9½"	9½"
—	9¾"	9¾"	9¾"	9¾"	9¾"	9¾"	9¾"	9¾"
—	10"	10"	10"	10"	10"	10"	10"	10"
—	10¼"	10¼"	10¼"	10¼"	10¼"	10¼"	10¼"	10¼"
—	10½"	10½"	10½"	10½"	10½"	10½"	10½"	10½"
—	10¾"	10¾"	10¾"	10¾"	10¾"	10¾"	10¾"	10¾"
—	11"	11"	11"	11"	11"	11"	11"	11"
—	11¼"	11¼"	11¼"	11¼"	11¼"	11¼"	11¼"	11¼"
—	11½"	11½"	11½"	11½"	11¼"	11½"	11½"	11½"
—	11¾"	11¾"	11¾"	11¾"	11¾"	11¾"	11¾"	11¾"
—	12"	12"	12"	12"	12"	12"	12"	12"
—	—	—	—	12¼"	12¼"	12¼"	12¼"	12¼"
—	—	—	—	12½"	12½"	12½"	12½"	12½"
—	—	—	—	12¾"	12¼"	12¾"	12¾"	12¾"
—	—	—	—	13"	13"	13"	13"	13"
—	—	—	—	—	13¼"	13¼"	13¼"	13¼"
—	—	—	—	—	13½"	13½"	13½"	13½"
—	—	—	—	—	—	—	13¾"	13¾"
—	—	—	—	—	—	—	14"	14"
—	—	—	—	—	—	—	14½"	14½"
—	—	—	—	—	—	—	15"	15"
—	—	—	—	—	—	—	15½"	15½"
—	—	—	—	—	—	—	16"	16"
—	—	—	—	—	—	—	16½"	16½"
—	—	—	—	—	—	—	17"	17"
—	—	—	—	—	—	—	17½"	17½"
—	—	—	—	—	—	—	18"	18"
—	—	—	—	—	—	—	18½"	18½"
—	—	—	—	—	—	—	19"	19"
—	—	—	—	—	—	—	19½"	19½"
—	—	—	—	—	—	—	20"	20"

HEAVY 2H NUTS U.N.C. THREAD

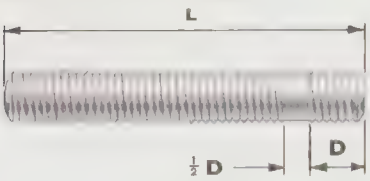
Manufactured to BS1750 Part 2 (ASTM A194 Grade 2H)

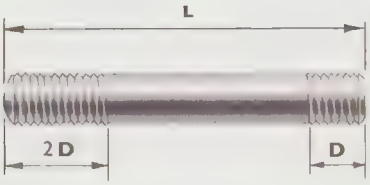
Part Number	Nominal Diameter	Dimensions across flats	Thickness	Standard Pack
2H ½	½"	0.855/0.875"	0.464/0.504"	3,300
2H ⅝	⅝"	1.037/1.062"	0.587/0.631"	900
2H ¾	¾"	1.225/1.250"	0.710/0.587"	500
2H ⅞	⅞"	1.407/1.437"	0.833/0.885"	300
2H 1	1"	1.595/1.625"	0.956/1.012"	250
2H 1⅛	1⅛"	1.782/1.812"	1.079/1.139"	150
2H 1¼	1¼"	1.955/2.000"	1.187/1.251"	100
2H 1⅜	1⅜"	2.142/2.187"	1.310/1.378"	50
2H 1½	1½"	2.330/2.375"	1.433/1.505"	50
2H 1⅝	1⅝"	2.502/2.562"	1.556/1.672"	25

Also Available, B7 Studs & 2H Nuts
1⅛", 1¾", 1⅞", 2", 2¼", 2½", 2¾", 3" Diameter
B14 Studs with Class 4 Nuts
Sizes up to 1⅜" Diameter

ENGINEERS STUDS — BRIGHT STEEL

WHITWORTH THREAD





STUDS — Old Standard BS. 1083

This Standard provides that the length of the Metal or Stud End thread shall be equal to the Stud Diameter. One half of the diameter is left plain and the balance screwed.

STUDS — New Standard BS.2693

This Standard provides that the length of the Metal or Stud End thread shall be equal to the Stud Diameter. The length of thread at the Nut End is equal to twice the diameter of the Stud and the balance is left plain.

Please Note: Both Standards are available.

Diameter ▶	¼″	5/16″	⅜″	7/16″	½″	⅝″	¾″	⅞″	1″	1⅛″	1¼″	◀ Diameter
Length	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Length
¾″	100	—	—	—	—	—	—	—	—	—	—	¾″
7/8″	100	—	—	—	—	—	—	—	—	—	—	7/8″
1″	100	100	100	—	—	—	—	—	—	—	—	1″
1¼″	100	100	100	—	100	—	—	—	—	—	—	1¼″
1½″	100	100	100	100	100	50	—	—	—	—	—	1½″
1¾″	100	100	100	100	100	50	50	—	—	—	—	1¾″
2″	100	100	100	100	100	50	50	—	—	—	—	2″
2¼″	50	100	100	100	100	50	50	—	—	—	—	2¼″
2½″	50	100	100	100	100	50	25	25	A.O.	—	—	2½″
2¾″	—	100	100	50	50	50	25	25	—	—	—	2¾″
3″	50	100	100	50	50	25	25	25	A.O.	—	A.O.	3″
3¼″	—	100	50	50	50	25	25	25	—	—	—	3¼″
3½″	—	100	50	50	50	25	25	25	A.O.	—	—	3½″
3¾″	—	—	50	50	50	25	25	25	A.O.	—	—	3¾″
4″	—	—	50	50	50	25	25	25	A.O.	A.O.	A.O.	4″
4¼″	—	—	—	—	—	25	25	—	—	—	—	4¼″
4½″	—	—	—	50	50	25	25	25	A.O.	—	A.O.	4½″
4¾″	—	—	—	—	50	25	25	—	—	—	—	4¾″
5″	—	—	—	50	25	25	25	10	A.O.	A.O.	A.O.	5″
5½″	—	—	—	—	25	25	25	10	A.O.	—	—	5½″
6″	—	—	—	—	25	25	25	10	A.O.	A.O.	A.O.	6″
6½″	—	—	—	—	25	25	25	10	A.O.	—	—	6½″
7″	—	—	—	—	25	25	25	10	A.O.	—	—	7″

NB A.O. = As ordered

ENGINEERS STUDS — BRASS

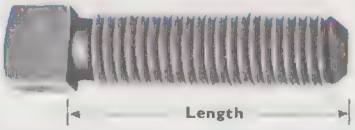
WHITWORTH THREAD

¼″ Diam.	5/16″ Diam.	⅜″ Diam.	7/16″ Diam.	½″ Diam.	⅝″ Diam.	¾″ Diam.	1″ Diam.
Length	Length	Length	Length	Length	Length	Length	Length
1″	—	—	—	—	—		1″
1¼″	—	1¼″	—	1¼″	—	—	1¼″
1½″	1½″	1½″	1½″	1½″	1½″	—	1½″
1¾″	1¾″	1¾″	1¾″	1¾″	1¾″	—	1¾″
2″	2″	2″	2″	2″	2″	2″	2″
—	2¼″	2¼″	2¼″	2¼″	2¼″	—	—
2½″	2½″	2½″	2½″	2½″	2½″	2½″	2½″
—	3″	3″	—	3″	3″	3″	—
—	—	—	—	—	—	—	—
—	—	3½″	—	3½″	3½″	3½″	—
—	—	4″	4″	4″	4″	4″	4″
—	—	—	—	—	—	4½″	5″
—	—	—	—	—	—	5″	6″
—	—	—	—	—	—	6″	7″

SET SCREWS

WHITWORTH THREAD

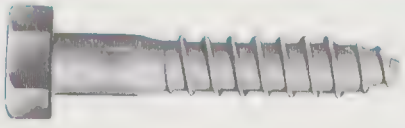
CASE HARDENED
SQUARE HEAD
CUP POINT



Diameter ▶	¼″	5/16″	⅜″	7/16″	½″	⅝″	¾″	⅞″	1″	◀ Diameter
Length	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Std. Pack	Length
⅜″	100	100	100	—	—	—	—	—	—	⅜″
½″	100	100	100	—	100	—	—	—	—	½″
⅝″	100	100	100	—	100	—	—	—	—	⅝″
¾″	100	100	100	100	100	50	—	—	—	¾″
⅞″	100	100	100	—	100	—	—	—	—	⅞″
1″	100	100	100	100	100	50	25	—	—	1″
1¼″	100	100	100	100	100	50	25	—	—	1¼″
1½″	100	100	100	100	100	50	25	A.O.	A.O.	1½″
1¾″	100	100	100	100	50	50	25	A.O.	—	1¾″
2″	100	100	100	100	50	50	25	A.O.	A.O.	2″
2¼″	50	—	100	—	50	25	25	A.O.	—	2¼″
2½″	50	50	100	50	50	25	25	A.O.	A.O.	2½″
2¾″	—	—	50	—	50	25	25	—	—	2¾″
3″	50	50	50	50	50	25	25	A.O.	A.O.	3″
3½″	—	—	—	—	50	25	25	A.O.	A.O.	3½″
4″	—	—	—	—	50	25	25	A.O.	A.O.	4″
4½″	—	—	—	—	—	25	25	A.O.	A.O.	4½″
5″	—	—	—	—	—	25	25	A.O.	A.O.	5″
5½″	—	—	—	—	—	25	25	A.O.	A.O.	5½″
6″	—	—	—	—	—	25	25	A.O.	A.O.	6″

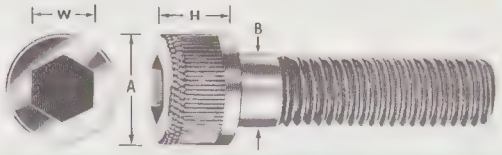
COACH SCREWS
BLACK STEEL OR GALVANISED

GIMLET POINT



¼″ Diameter		5/16″ Diameter		⅜″ Diameter		½″ Diameter		⅝″ Diameter		¾″ Diameter	
Length	Standard Pack	Length	Standard Pack	Length	Standard Pack	Length	Standard Pack	Length	Standard Pack	Length	Standard Pack
1½″	150	1½″	150	1½″	150	1½″	400	—	—	—	—
2″	150	2″	150	2″	150	2″	400	2″	200	—	—
2½″	150	2½″	150	2½″	100	2½″	300	2½″	200	2½″	125
3″	150	3″	150	3″	100	3″	300	3″	200	3″	125
3½″	150	3½″	150	3½″	100	3½″	250	3½″	150	3½″	100
4″	150	4″	150	4″	100	4″	250	4″	150	4″	100
—	—	—	—	4½″	400	4½″	200	4½″	125	4½″	75
—	—	—	—	5″	400	5″	200	5″	125	5″	75
—	—	—	—	5½″	400	5½″	200	5½″	100	5½″	75
—	—	—	—	6″	300	6″	150	6″	100	6″	75
—	—	—	—	6½″	300	6½″	150	6½″	100	6½″	75
—	—	—	—	7″	250	7″	125	7″	100	7″	50
—	—	—	—	8″	250	8″	125	8″	75	8″	50
—	—	—	—	—	—	9″	125	9″	75	9″	50

UNBRAKO SOCKET SCREWS

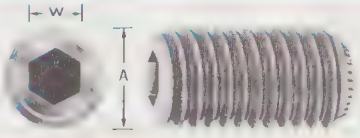


SOCKET HEAD CAP SCREWS — 1936 SERIES
WHITWORTH AND B.S.F. THREAD

STANDARD LENGTHS AVAILABLE AND QUANTITY PER BOX

Screw Diameter "B"	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	
Head Diameter "A"	7/32"	5/16"	3/8"	7/16"	9/16"	5/8"	3/4"	7/8"	1"	1 1/8"	1 5/16"	
Head Depth "H"	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	
Socket Across Flats "W"	3/32"	5/32"	5/16"	7/32"	5/16"	5/16"	3/8"	1/2"	9/16"	9/16"	5/8"	
Length 1/4"	—	100	—	—	—	—	—	—	—	—	—	1/4" Length
3/8"	100*	100	100	100	—	—	—	—	—	—	—	3/8"
1/2"	100*	100	100	100	100	—	—	—	—	—	—	1/2"
5/8"	100*	100	100	100	100	—	100	—	—	—	—	5/8"
3/4"	100*	100	100	100	100	—	100	—	—	—	—	3/4"
7/8"	—	100	100	100	100	100*	50*	—	—	—	—	7/8"
1"	100*	100	100	100	100	100	50	10	—	—	—	1"
1 1/4"	—	100	100	100	100	100	50	10	25	—	—	1 1/4"
1 1/2"	—	100	100	100	100	100	50	10	25	—	—	1 1/2"
1 3/4"	—	100	100	100	100	50	50	10	25	10*	—	1 3/4"
2"	—	100	100	100	100	50	50	10	25	10	5	2"
2 1/4"	—	100*	100	100	100	50	50	10	25	10*	5*	2 1/4"
2 1/2"	—	100*	100	100	50	50	50	10	25	10	5	2 1/2"
2 3/4"	—	—	100	100	50	50	25	10	10*	—	—	2 3/4"
3"	—	—	100	100	50	50	25	10	10	10	5	3"
3 1/4"	—	—	100	100	50	—	25	10	10*	10	—	3 1/4"
3 1/2"	—	—	100	100	50	50*	25	10	10	10*	5	3 1/2"
3 3/4"	—	—	—	—	—	—	—	—	10*	—	—	3 3/4"
4"	—	—	100	100	50	25*	25	10	10	10	5	4"
4 1/2"	—	—	—	—	50	25*	25	10	10	5*	5	4 1/2"
5"	—	—	—	50	25	25*	25	10	10	5*	5	5"
5 1/2"	—	—	—	—	25	—	10	10	10	—	5*	5 1/2"
6"	—	—	—	—	25*	—	10	10	10	5*	5	6"
6 1/2"	—	—	—	—	—	—	10	10	10	—	—	6 1/2"
7"	—	—	—	—	—	—	10	10	10	—	5	7"
7 1/2"	—	—	—	—	—	—	10	10	—	—	—	7 1/2"
8"	—	—	—	—	—	—	10	10	10	—	5*	8"
8 1/2"	—	—	—	—	—	—	—	10	—	—	—	8 1/2"
9"	—	—	—	—	—	—	—	—	—	—	5*	9"

* These Sizes Not Standard in B.S.F. Thread



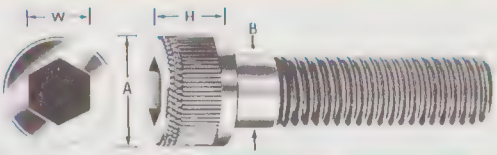
SOCKET SET SCREWS KNURLED CUP POINT
WHITWORTH AND B.S.F. THREAD

STANDARD LENGTHS AVAILABLE AND QUANTITY PER BOX

Screw Diameter "A"	1/8"	5/32"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	
Socket Across Flats "W"	1/16"	5/64"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"	1/2"	9/16"	
Length 1/8"	100*	—	—	—	—	—	—	—	—	—	—	—	1/8" Length
3/16"	—	100*	100	—	—	—	—	—	—	—	—	—	3/16"
1/4"	100*	100*	100	100	100	—	—	—	—	—	—	—	1/4"
5/16"	100*	100*	100	100	100	—	—	—	—	—	—	—	5/16"
3/8"	100*	100*	100	100	100	100	—	—	—	—	—	—	3/8"
7/16"	—	—	100	—	—	—	100	—	—	—	—	—	7/16"
1/2"	—	100*	100	100	100	100	100	100	—	—	—	—	1/2"
5/8"	—	—	100	100	100	100	100	100	50	50	—	—	5/8"
3/4"	—	—	100	100	100	100	100	100	50	50	—	—	3/4"
7/8"	—	—	100	100	100	100	—	100	50	50	—	—	7/8"
1"	—	—	100	100	100	100	100	100	50	50	25	25	1"
1 1/4"	—	—	100	100	100	100	100	100	50	50	25*	—	1 1/4"
1 1/2"	—	—	—	100	100	100	100	100	50	50*	25*	25*	1 1/2"
1 3/4"	—	—	—	100	100*	100	—	100*	50*	50*	—	—	1 3/4"
2"	—	—	—	100	100	100	—	50	25	25	25	25	2"
2 1/2"	—	—	—	—	100	100*	—	50	25*	—	25*	25*	2 1/2"
3"	—	—	—	—	—	—	—	50	25*	25	25*	25	3"

* These Sizes Not Standard in B.S.F. Thread.

UNBRAKO SOCKET SCREWS



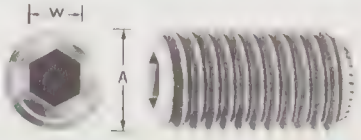
SOCKET HEAD CAP SCREWS — 1936 SERIES
U.N.C. AND U.N.F. THREAD

STANDARD LENGTHS AVAILABLE AND QUANTITY PER BOX

Screw Diameter "B"	No. 4	No. 5	No. 6	No. 8	No. 10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	
Head Diameter "A"	7/16"	.205	7/32"	17/64"	5/16"	3/8"	7/16"	9/16"	5/8"	3/4"	7/8"	1"	1 1/8"	—	
Head Depth "H"	.112	.113	.138	.164	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	—	
Socket Across Flats "W"	5/64"	3/32"	3/32"	1/8"	5/32"	3/16"	7/32"	5/16"	5/16"	3/8"	1/2"	9/16"	9/16"	—	
Length 1/4"	100*	100*	100	100*	—	—	—	—	—	—	—	—	—	—	1/4" Length
5/16"	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5/16"
3/8"	100*	100*	100	100*	100	100	100†	—	—	—	—	—	—	—	3/8"
1/2"	100*	100*	100	100*	100	100	100	100	—	—	—	—	—	—	1/2"
5/8"	100*	100*	100	100*	100	100	100	100	—	—	—	—	—	—	5/8"
3/4"	100*	100*	100*	100*	100	100	100	100	—	100	—	—	—	—	3/4"
7/8"	—	—	100*	100*	100	100	100	100	—	50	—	—	—	—	7/8"
1"	—	—	100*	100*	100	100	100	100	100	50	25	—	—	—	1"
1 1/4"	—	—	—	100*	100	100	100	100	100	50	25	25*	—	—	1 1/4"
1 1/2"	—	—	—	100*	100	100	100	100	100	50	25	25	—	—	1 1/2"
1 3/4"	—	—	—	—	100	100	100	100	50*	50	25	25	10*	—	1 3/4"
2"	—	—	—	—	100	100	100	100	50	50	25	25*	10*	10*	2"
2 1/4"	—	—	—	—	—	100	100	100	50*	50	25	25*	10*	10*	2 1/4"
2 1/2"	—	—	—	—	—	100	100	50	50*	50	25	25*	10	10*	2 1/2"
2 3/4"	—	—	—	—	—	100*	100*	50	50*	25	25*	10*	10*	—	2 3/4"
3"	—	—	—	—	—	100	100*	50	50	25	25	10	10*	10*	3"
3 1/4"	—	—	—	—	—	—	100*	50*	-	25*	25*	—	—	—	3 1/4"
3 1/2"	—	—	—	—	—	—	100	50*	50*	25*	25*	10*	—	—	3 1/2"
4"	—	—	—	—	—	—	—	50*	25*	25*	10	10	10*	10*	4"
4 1/2"	—	—	—	—	—	—	—	50*	—	25*	10	10*	—	10*	4 1/2"
5"	—	—	—	—	—	—	—	25*	-	25*	10	10*	-	10*	5"
5 1/2"	—	—	—	—	—	—	—	—	—	10*	10	10*	—	—	5 1/2"
6"	—	—	—	—	—	—	—	—	—	10*	10	10*	—	10*	6"
6 1/2"	—	—	—	—	—	—	—	—	—	10*	10*	—	-	—	6 1/2"
7"	—	—	—	—	—	—	—	—	—	10*	10*	—	—	—	7"
7 1/2"	—	—	—	—	—	—	—	—	-	-	—	-	—	—	7 1/2"
8"	—	—	—	—	—	—	—	—	—	10*	10*	-	—	—	8"

* These Sizes Not Standard in U.N.F. Thread.

† This Size 1960 Series Only — Head Diameter 1 5/32"



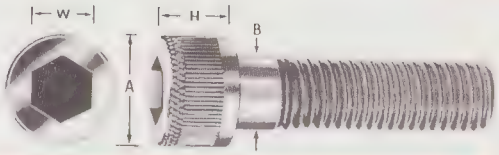
SOCKET SET SCREWS — KNURLED CUP POINT
U.N.C. AND U.N.F. THREAD

STANDARD LENGTHS AVAILABLE AND QUANTITY PER BOX

Screw Diameter "A"	No. 4	No. 5	No. 6	No. 8	No. 10	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	
Socket Across Flats "W"	.050	1/16"	1/16"	5/64"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"	1/2"	9/16"	
Length (Std. Pack) 1/8"	100	100	100	100	—	—	—	—	—	—	—	—	—	—	1/8" Length
3/16"	100	100	100	100	100	—	—	—	—	—	—	—	—	—	3/16"
1/4"	100	100	100	100	100	100	100	—	—	—	—	—	—	—	1/4"
5/16"	100	100*	100	100	100	100	100	—	—	—	—	—	—	—	5/16"
3/8"	100	100*	100	100	100	100	100	100	—	—	—	—	—	—	3/8"
7/16"	100*	100*	100*	100*	100*	—	—	—	100	—	—	—	—	—	7/16"
1/2"	100*	100*	100*	100	100	100	100	100	100	100	—	—	—	—	1/2"
5/8"	100*	100*	100*	100*	100	100	100	100*	100*	100	50*	50*	—	—	5/8"
3/4"	—	100*	100*	100*	100	100	100	100	100*	100	50*	50*	—	—	3/4"
7/8"	—	—	100*	100*	100*	100*	100*	100*	100*	100*	—	50*	—	—	7/8"
1"	—	—	100*	100*	100*	100	100	100	100*	100	50	50*	25*	25*	1"
1 1/4"	—	—	—	—	100	100	100	100	100*	100*	50*	50*	—	—	1 1/4"
1 1/2"	—	—	—	—	—	100*	100*	100	100*	100*	50*	50*	25*	25*	1 1/2"
1 3/4"	—	—	—	—	—	100*	100*	100*	—	100	50*	50*	—	—	1 3/4"
2"	—	—	—	—	—	100*	100*	100	—	50*	25*	25*	25*	25*	2"
2 1/2"	—	—	—	—	—	—	—	100	—	50*	25*	25*	25*	25*	2 1/2"
3"	—	—	—	—	—	—	—	—	—	50*	—	25*	25*	25*	3"

* These Sizes are Not Standard in U.N.F. Thread.

UNBRAKO SOCKET SCREWS



SOCKET HEAD CAP SCREWS — 1936 SERIES

B.A. THREAD

STANDARD LENGTHS AVAILABLE AND QUANTITY PER BOX

Screw Diameter "B"	0BA	1BA	2BA	3BA	4BA	5BA	6BA	8BA	
Head Diameter "A"	3/8"	5/16"	5/16"	1/4"	7/32"	7/32"	3/16"	—	
Head Depth "H"	.236"	.209"	3/16"	.161"	.142"	.126"	.110"	—	
Socket Across Flats "W"	3/16"	5/32"	5/32"	1/8"	3/32"	3/32"	5/64"	—	
Length 1/8"	—	—	—	—	—	—	—	100	1/8" Length
3/16"	—	—	—	—	100	—	100	100	3/16"
1/4"	—	—	100	—	100	—	100	100	1/4"
5/16"	—	—	100	—	100	—	100	100	5/16"
3/8"	—	—	100	100	100	100	100	100	3/8"
7/16"	—	—	—	—	100	—	100	—	7/16"
1/2"	100	100	100	100	100	100	100	100	1/2"
5/8"	100	100	100	100	100	100	100	100	5/8"
3/4"	100	100	100	100	100	100	100	100	3/4"
7/8"	100	—	100	100	100	—	100	—	7/8"
1"	100	100	100	100	100	—	100	100	1"
1 1/4"	100	100	100	—	100	—	100	—	1 1/4"
1 1/2"	100	—	100	—	100	—	—	—	1 1/2"
1 3/4"	100	—	100	—	100	—	—	—	1 3/4"
2"	100	—	100	—	100	—	—	—	2"
2 1/4"	—	—	100	—	—	—	—	—	2 1/4"
2 1/2"	—	—	100	—	—	—	—	—	2 1/2"

SOCKET SET SCREWS — KNURLED CUP POINT

B.A. THREAD

STANDARD LENGTHS AVAILABLE AND QUANTITY PER BOX

Screw Diameter "A"	0BA	2BA	3BA	4BA	5BA	6BA	
Socket Across Flats "W"	1/8"	3/32"	5/64"	1/16"	1/16"	.05"	
Length 1/8"	—	—	—	100	100	100	1/8" Length
3/16"	—	100	100	100	100	100	3/16"
1/4"	100	100	100	100	100	100	1/4"
5/16"	100	100	100	100	100	100	5/16"
3/8"	100	100	100	100	100	100	3/8"
7/16"	—	100	—	100	—	100	7/16"
1/2"	100	100	100	100	100	100	1/2"
5/8"	—	100	—	100	—	100	5/8"
3/4"	100	100	—	100	100	100	3/4"
7/8"	—	100	—	—	—	—	7/8"
1"	100	100	—	100	—	—	1"
1 1/4"	100	100	—	—	—	—	1 1/4"

SOCKET HEAD CAP SCREWS STAINLESS STEEL

are available in:

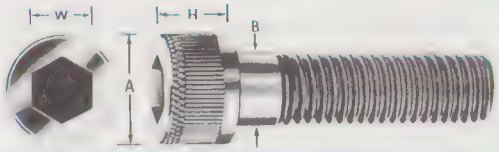
B.A. Thread	6BA, 4BA, 2BA, 0BA
U.N.F. Thread	No. 0, No. 10, 1/4", 3/8"
U.N.C. Thread	No. 2, No. 4, No. 6, No. 8, No. 10, 1/4", 3/8", 1/2"
WHITWORTH Thread	3/16", 1/4", 5/16", 3/8", 1/2"
B.S.F. Thread	1/4", 5/16", 3/8", 1/2"

SOCKET SET SCREWS STAINLESS STEEL

are available in:

B.A. Thread	6BA, 4BA, 2BA, 0BA
U.N.C. Thread	No. 4, No. 6, No. 10, 1/4", 5/16", 3/8", 1/2"
WHITWORTH Thread	3/16", 1/4", 5/16", 3/8", 1/2"
B.S.F. Thread	1/4", 5/16", 3/8", 1/2"

UNBRAKO SOCKET SCREWS



SOCKET HEAD CAP SCREWS
METRIC THREAD

STANDARD LENGTHS AVAILABLE AND QUANTITY PER BOX

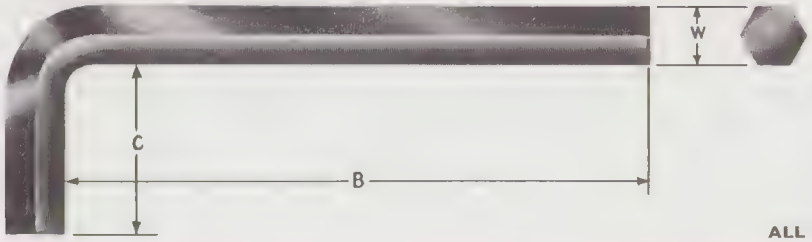
Screw Diameter "B"	3mm	4mm	5mm	6mm	8mm	10mm	12mm	14mm	16mm	18mm	20mm	24mm	
Pitch	0.5	0.7	0.8	1.0	1.25	1.50	1.75	2.0	2.0	2.50	2.50	3.0	
Head Diameter "A"	5.5	7	9	10	13	16	18	22	24	27	30	36	
Head Depth "H"	3	4	5	6	8	10	12	14	16	18	20	24	
Socket Across Flats "W"	2.5	3	4	5	6	8	10	12	14	17	17	19	
Length 5	100	100	—	—	—	—	—	—	—	—	—	—	5 Length
6	100	100	100	—	—	—	—	—	—	—	—	—	6
8	100	100	100	100	—	—	—	—	—	—	—	—	8
10	100	100	100	100	100	—	—	—	—	—	—	—	10
12	100	100	100	100	100	100	—	—	—	—	—	—	12
15	100	100	100	100	100	—	—	—	—	—	—	—	15
20	100	100	100	100	100	100	50	—	—	—	—	—	20
22	100	100	100	100	100	100	50	—	—	—	—	—	22
25	100	100	100	100	100	100	50	—	—	—	—	—	25
30	100	100	100	100	100	100	50	50	50	—	—	—	30
35	100	100	100	100	100	100	50	50	25	—	—	—	35
40	—	100	100	100	100	100	50	50	25	25	25	—	40
45	—	100	100	100	100	50	50	50	25	25	25	—	45
50	—	100	100	100	100	50	50	50	25	25	25	10	50
55	—	—	100	100	100	50	50	50	25	—	25	—	55
60	—	—	100	100	100	50	50	50	25	25	25	10	60
65	—	—	—	100	100	50	50	50	25	25	25	10	65
70	—	—	100	100	100	50	50	50	25	25	25	10	70
75	—	—	—	100	100	50	50	—	25	—	25	—	75
80	—	—	—	100	100	50	50	50	25	25	25	10	80
90	—	—	—	100	100	50	50	50	25	—	25	10	90
100	—	—	—	100	100	50	50	50	25	25	25	10	100
110	—	—	—	100	100	50	50	50	25	25	20	—	110
120	—	—	—	100	100	50	50	—	25	—	20	10	120
130	—	—	—	—	100	50	50	—		—	20	—	130
140	—	—	—	—	—	—	50	—	—	—	—	—	140
150	—	—	—	—	—	—	50	—	25	—	20	10	150
160	—	—	—	—	—	—	50	—	25	—	—	—	160

SOCKET SET SCREWS — KNURLED CUP POINT
METRIC THREAD

STANDARD LENGTHS AVAILABLE AND QUANTITY PER BOX

Screw Diameter "A"	3mm	4mm	5mm	6mm	8mm	10mm	12mm	16mm	20mm	24mm	
Pitch	0.5	0.7	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	
Socket Across Flats "W"	1.5	2	2.5	3	4	5	6	8	10	12	
Length 3	100	—	—	—	—	—	—	—	—	—	3 Length
4	100	100	—	—	—	—	—	—	—	—	4
5	100	100	100							—	5
6	100	100	100	100	—	—	—	—	—	—	6
8	100	100	100	100	100	—	—	—	—	—	8
10	100	100	100	100	100	100	—	—	—	—	10
12	100	100	100	100	100	100	100	—	—	—	12
14	—	100	100	100	—	—	—	—	—	—	14
16	—	100	100	100	100	100	100	50	—	—	16
20	—	100	100	100	100	100	100	50	25	—	20
25	—	—	100	100	100	100	100	50	25	25	25
30	—	—	100	100	100	100	100	25	25	25	30
35	—	—	—	100	100	—	100	25	25	25	35
40	—	—	—	100	100	100	50	25	25	25	40
45	—	—	—	100	100	50	50	25	25	25	45
50	—	—	—	100	100	50	50	25	25	25	50
55	—	—	—	—	—	50	50	25	25	—	55
60	—	—	—	—	—	—	50	25	25	25	60

UNBRAKO HEXAGON WRENCHES



INCH SERIES

ALL DIMENSIONS INCHES

Key Size Across Flats	Std. Pack	Length Short Arm C	Length of Long Arm B		Cap Screws			Set Screws			Countersunk			Button Head			Shoulder Screws
			Short Series	Long Series	Whit. BSF	UNC UNF	BA	Whit. BSF	UNC UNF	BA	Whit. BSF	UNC UNF	BA	Whit. BSF	UNC UNF	BA	
.028	100	7/32	1 7/32	—	—	—	—	—	—	—	—	—	—	—	—	—	—
.035	100	11/32	1 7/32	—	—	—	—	—	1, 2	8	—	—	—	—	—	—	—
.050	100	17/32	1 21/32	—	—	—	—	—	3, 4	6	—	1, 2, 3	6	—	1, 2	—	—
1/16	100	9/16	1 3/4	3	—	1	—	1/8	5, 6	5, 4	—	4	4	—	3, 4	—	—
5/64	100	39/64	1 7/8	3 3/16	—	4	6	5/32	8	3	—	5, 6	3	—	5, 6	—	—
3/32	100	21/32	2	3 3/8	1/8	5, 6	5, 4	3/16	10	2, 1	3/16	8	2	—	8	—	—
7/64	100	45/64	2 1/8	3 9/16	—	—	—	—	—	—	—	—	—	—	—	—	—
1/8	100	3/4	2 1/4	3 3/4	—	8	3	1/4	1/4	—	—	10	—	3/16	10	2	1/4
9/64	100	51/64	2 3/8	3 31/32	—	—	—	—	—	—	—	—	—	—	—	—	—
5/32	100	27/32	2 1/2	4 1/8	3/16	10	2, 1	5/16	5/16	—	1/4	—	—	1/4	—	—	5/16
3/16	100	15/16	2 3/4	4 1/2	1/4	1/4	—	3/8	3/8	—	5/16	—	—	5/16	—	—	3/8
7/32	50	1 1/32	3	4 7/8	5/16	5/16	—	7/16	7/16	—	3/8	—	—	3/8	—	—	—
1/4	50	1 1/8	3 1/4	5 1/4	—	—	—	1/2	1/2	—	7/16	—	—	7/16	—	—	1/2
5/16	50	1 1/4	3 3/4	6	3/8 & 7/16	3/8 & 7/16	—	5/8	5/8	—	1/2	—	—	1/2	—	—	5/8
3/8	25	1 3/8	4 1/4	6 3/4	1/2	1/2	—	3/4	3/4	—	5/8 & 3/4	—	—	5/8	—	—	3/4
7/16	25	1 1/2	4 3/4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1/2	25	1 5/8	5 1/4	8 1/4	5/8	5/8	—	7/8	7/8	—	—	—	—	—	—	—	7/8, 1
9/16	10	1 3/4	5 3/4	9	3/4 & 7/8	3/4 & 7/8	—	1	1	—	—	—	—	—	—	—	—
5/8	5	1 7/8	6 1/4	9 3/4	1	1	—	—	—	—	—	—	—	—	—	—	1 1/4
3/4	5	2 1/8	7 1/4	11 1/4	1 1/4	1 1/4	—	—	—	—	—	—	—	—	—	—	—
7/8	1	2 3/8	8 1/4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	1	2 5/8	9 1/4	—	—	—	—	—	—	—	—	—	—	—	—	—	—

METRIC SERIES — Dimensions Millimeters

Key Size Across Flats	1.3	1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	17.0	19.0
Standard Pack	100	100	100	100	100	100	50	50	50	25	25	25	10	10
Cap Screw Size	—	—	2.3/2.6	3	4	5	6	8	10	12	14	16	18/20	24
Set Screw Size	—	3	4	5	6	8	10	12/14	16/18	20	—	—	—	—
Countersunk	—	—	3	4	5	6	8	10	12	14/16	—	—	—	—

HEXAGON WRENCH SETS — Plastic Pouch

Inch Series Contain	1/16	5/64	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8
Metric Series Contain	M1.5	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10.0	—

MASTER 1A, 8 Keys 1/16″ — 1/4″ on Ring
MASTER 2A, 5 Keys 1/4″ — 9/16″ on Ring
MASTER 10A, 5 Keys 5/16″ — 3/8″ on Ring

MASTER 1M, 7 Keys 2M — 8M on Ring
TUDOR No. 9, 9 Keys 1/16″ — 3/8″ Plastic Pouch

UNBRAKO SOCKET COUNTERSUNK SCREWS

B.A. THREAD — Included Angle Under Head 90°

STANDARD PACK 100

Screw Size	Head Diameter	Socket Across Flats	Standard Lengths Available									
6BA	.185″	.050″	¼″	5/16″	⅜″	½″	⅝″	¾″	—	—	—	—
4BA	.242″	1/16″	¼″	5/16″	⅜″	½″	⅝″	¾″	—	—	—	—
3BA	.275″	5/64″	—	—	⅜″	½″	—	¾″	—	1″	—	—
2BA	.309″	3/32″	¼″	5/16″	⅜″	½″	⅝″	¾″	⅞″	1″	1¼″	1½″
0BA	.403″	⅛″	—	—	⅜″	½″	⅝″	¾″	—	1″	1¼″	—

WHITWORTH AND B.S.F. THREAD — Included Angle Under Head 90°

STANDARD PACK 100 (½″ 50, ⅝″ AND ¾″ 25)

Screw Size	Head Diameter	Socket Across Flats	Standard Lengths Available														
3/16″	.321″	3/32″	¼″	5/16″*	⅜″	½″	⅝″	¾″	⅞″	1″	1¼″	1½″	—	—	—	—	—
¼″	.431″	1/8″	—	—	⅜″	½″	⅝″	¾″	⅞″	1″	1¼″	1½″	1¾″	2″	—	—	—
5/16″	.541″	5/32″	—	—	—	½″	⅝″	¾″	⅞″	1″	1¼″	1½″	1¾″	2″	—	—	—
⅜″	.648″	3/16″	—	—	—	½″	⅝″	¼″	—	1″	1¼″	1½″	1¾″	2″	2½″	3″	—
7/16″	.745″	¼″	—	—	—	—	—	—	—	1″	1¼″*	1½″*	—	—	—	—	—
½″	.866″	5/16″	—	—	—	—	—	¾″	—	1″	1¼″	1½″	1¾″	2″	2½″	3″	—
⅝″	1.084″	⅜″	—	—	—	—	—	—	—	—	1¼″	1½″*	1¾″*	2″	2½″	3″*	3½″
¾″	1.302″	½″	—	—	—	—	—	—	—	—	1¼″	1½″	1¾″	2″	2½″	3″	3½″*	4″

* Sizes Not Standard B.S.F. Thread

U.N.C. AND U.N.F. THREAD — Included Angle Under Head 80°-82°

STANDARD PACK 100 (½″ 50, ⅝″ AND ¾″ 25)

Screw Size	Head Diameter	Socket Across Flats	Standard Lengths Available											
4	.218″	1/16″	¼″	⅜″	½″	⅝″	¾″	—	—	—	—	—	—	—
6	.263″	5/64″	¼″	⅜″	½″	⅝″	¾″	—	—	—	—	—	—	—
8	.311″	3/32″	—	⅜″	½″	—	¾″	1″	—	—	—	—	—	—
10	.359″	⅛″	—	⅜″	½″	⅝″	¾″	1″	1¼″	1½″	—	—	—	—
¼″	.480″	5/32″	—	⅜″	½″	⅝″	¾″	1″	1¼″	1½″	—	—	—	—
5/16″	.600″	3/16″	—	—	½″	⅝″	¾″	1″	1¼″	1½″	1¾″*	2″*	—	—
⅜″	.720″	7/32″	—	—	½″*	⅝″*	¾″	1″	1⅛″	1½″	1¾″*	2″*	2½″*	3″*
7/16″	.781″	¼″	—	—	—	—	—	1″	1¼″	1½″	—	—	—	—
½″	.872″	5/16″	—	—	—	—	¾″	1″	1½″	1½″	1¾″	2″	2½″*	3″*
⅝″	1.112″	⅜″	—	—	—	—	—	—	1¼″	1½″	1¾″	2″	2½″	3″
¾″	1.355″	½″	—	—	—	—	—	—	1¼″	1½″	1¾″	2″	2½″	3″

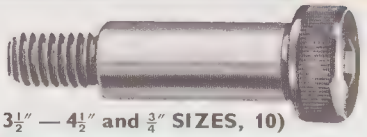
No. 4, No. 6, No. 8, ⅝″ and ¾″ and sizes marked * Not Standard U.N.F.

METRIC THREAD — Included Angle Under Head 90°

STANDARD PACK 100 (12, 14 AND 16 MM 50)

ALL DIMENSIONS MILLIMETERS

Screw Size	Pitch	Head Diameter	Socket Across Flats	Standard Lengths Available										
3	0.50	05.82	2	8	10	12	15	20	—	—	—	—	—	—
4	0.70	07.78	2.5	8	10	12	15	20	—	—	—	—	—	—
5	0.80	09.70	3	8	10	12	15	20	25	—	—	—	—	—
6	1.00	11.73	4	8	10	12	15	20	25	—	—	—	—	—
8	1.25	15.73	5	—	—	12	15	20	25	30	35	—	—	—
10	1.50	19.67	6	—	—	12	15	20	25	30	35	—	—	—
12	1.75	23.67	8	—	—	—	—	20	25	30	35	40	45	—
14	2.00	26.67	10	—	—	—	—	—	25	30	35	40	45	—
16	2.00	29.67	10	—	—	—	—	—	—	30	35	40	—	50



UNBRAKO SOCKET SHOULDER SCREWS

WHITWORTH AND U.N.C. THREADS

STANDARD PACK 25 ($\frac{5}{8}$" x $3\frac{1}{2}$" — $4\frac{1}{2}$" and $\frac{3}{4}$" SIZES, 10)

Shoulder Size	Thread Size x Length	Head Diameter	Head Depth	Socket Across Flats	Lengths Available (in inches)																		
$\frac{1}{4}$"	$\frac{3}{16}$W 10 UNC x $\frac{3}{8}$"	$\frac{3}{8}$"	.188"	$\frac{1}{8}$"	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	1"	$1\frac{1}{4}$"	$1\frac{1}{2}$"	—	2"	—	—	—	—	—	—	—	—	—	—
$\frac{5}{16}$"	$\frac{1}{4}$" x $\frac{1}{16}$"	$\frac{7}{16}$"	.219"	$\frac{5}{32}$"	—	—	$\frac{5}{8}$"	$\frac{3}{4}$"	1"	$1\frac{1}{4}$"	$1\frac{1}{2}$"	$1\frac{3}{4}$"	2"	$2\frac{1}{4}$"	—	—	—	—	—	—	—	—	—
$\frac{3}{8}$"	$\frac{5}{16}$" x $\frac{1}{2}$"	$\frac{9}{16}$"	$\frac{1}{4}$"	$\frac{3}{16}$"	—	—	$\frac{5}{8}$"	$\frac{3}{4}$"	1"	$1\frac{1}{4}$"	$1\frac{1}{2}$"	$1\frac{3}{4}$"	2"	$2\frac{1}{4}$"	$2\frac{1}{2}$"	$2\frac{3}{4}$"	3"	$3\frac{1}{4}$"	$3\frac{1}{2}$"	$3\frac{3}{4}$"	4"	—	—
$\frac{1}{2}$"	$\frac{3}{8}$" x $\frac{5}{8}$"	$\frac{3}{4}$"	$\frac{5}{16}$"	$\frac{1}{4}$"	—	—	$\frac{5}{8}$"	$\frac{3}{4}$"	1"	$1\frac{1}{4}$"	$1\frac{1}{2}$"	$1\frac{3}{4}$"	2"	$2\frac{1}{4}$"	$2\frac{1}{2}$"	$2\frac{3}{4}$"	3"	$3\frac{1}{4}$"	$3\frac{1}{2}$"	$3\frac{3}{4}$"	4"	—	—
$\frac{5}{8}$"	$\frac{1}{2}$" x $\frac{3}{4}$"	$\frac{7}{8}$"	$\frac{3}{8}$"	$\frac{5}{16}$"	—	—	—	—	$1\frac{1}{4}$"	$1\frac{1}{2}$"	$1\frac{3}{4}$"	2"	2"	$2\frac{1}{4}$"	$2\frac{1}{2}$"	$2\frac{3}{4}$"	3"	$3\frac{1}{4}$"	$3\frac{1}{2}$"	$3\frac{3}{4}$"	4"	$4\frac{1}{2}$"	—
$\frac{3}{4}$"	$\frac{3}{8}$" x $\frac{7}{8}$"	1"	$\frac{1}{2}$"	$\frac{3}{8}$"	—	—	—	—	—	—	$1\frac{1}{2}$"	$1\frac{3}{4}$"	2"	$2\frac{1}{4}$"	$2\frac{1}{2}$"	$2\frac{3}{4}$"	3"	$3\frac{1}{4}$"	$3\frac{1}{2}$"	$3\frac{3}{4}$"	4"	$4\frac{1}{2}$"	$4\frac{3}{4}$"	5"

UNBRAKO TEE BOLTS

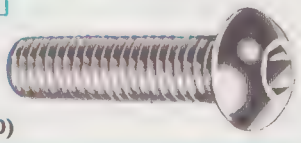
WHITWORTH THREAD

Manufactured to fit British and American Standard Tee Slots

STANDARD PACK AND LENGTHS AVAILABLE

Screw Size	$\frac{5}{16}$"	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	$\frac{7}{8}$"	1"	
Head Width	$\frac{9}{16}$"	$\frac{11}{16}$"	$\frac{7}{8}$"	$1\frac{1}{16}$"	$1\frac{1}{4}$"	$1\frac{7}{16}$"	$1\frac{11}{16}$"	
Head Height	$\frac{5}{32}$"	$\frac{3}{16}$"	$\frac{9}{32}$"	$\frac{3}{8}$"	$\frac{17}{32}$"	$\frac{9}{16}$"	$\frac{11}{16}$"	
Size across Flats	.302"	.365"	.485"	.610"	.730"	.855"	.980"	
Length 2"	25	25	25	25	—	—	—	2" Length
$2\frac{1}{2}$"	25	25	25	25	—	—	—	$2\frac{1}{2}$"
3"	—	25	25	25	25	10	—	3"
$3\frac{1}{2}$"	—	—	25	25	25	—	—	$3\frac{1}{2}$"
4"	—	25	25	25	10	10	10	4"
$4\frac{1}{2}$"	—	—	25	25	—	—	—	$4\frac{1}{2}$"
5"	—	25	25	10	10	10	10	5"
6"	—	25	25	10	10	10	10	6"
7"	—	—	25	10	10	10	5	7"
8"	—	25	25	10	10	10	5	8"
9"	—	—	25	10	10	5	—	9"
10"	—	—	25	10	5	5	5	10"
12"	—	—	10	5	5	5	5	12"
14"	—	—	—	5	5	5	5	14"
16"	—	—	—	5	5	—	5	16"

UNBRAKO SOCKET BUTTON HEAD SCREWS



WHITWORTH AND B.S.F. THREAD

STANDARD PACK 100 ($\frac{1}{8}$" SIZE 50)

Screw Size	Head Diameter	Head Depth	Socket Across Flats	Length Available								
$\frac{3}{16}$"	$\frac{23}{64}$"	.101"	$\frac{1}{8}$"	$\frac{1}{4}$"*	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"*	$\frac{3}{4}$"*	—	—	—	—
$\frac{1}{4}$"	$\frac{7}{16}$"	.132"	$\frac{5}{32}$"	—	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	1"	—	—	—
$\frac{5}{16}$"	$\frac{35}{64}$"	.166"	$\frac{3}{16}$"	—	—	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	1"	$1\frac{1}{4}$"	—	—
$\frac{3}{8}$"	$\frac{21}{32}$"	.199"	$\frac{7}{32}$"	—	—	—	—	$\frac{3}{4}$"	1"	$1\frac{1}{4}$"	—	—
$\frac{1}{2}$"	$\frac{7}{8}$"	.265"	$\frac{5}{16}$"	—	—	—	—	—	1"	$1\frac{1}{4}$"	$1\frac{1}{2}$"	2"
2BA	$\frac{23}{64}$"	.101"	$\frac{1}{8}$"	$\frac{1}{4}$"	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	—	—	—	—

* These Sizes Not Standard in B.S.F.

U.N.C. AND U.N.F. THREAD

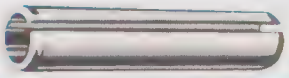
STANDARD PACK 100 ($\frac{1}{2}$" SIZE 50, $\frac{5}{8}$" SIZE 25)

Screw Size	Head Diameter	Head Depth	Socket across Flats	Length Available									
2	.164"	.046"	.050"	$\frac{1}{4}$"	—	$\frac{1}{2}$"	—	—	—	—	—	—	—
4	.213"	.059"	$\frac{1}{16}$"	$\frac{1}{4}$"	$\frac{3}{8}$"	$\frac{1}{2}$"	—	—	—	—	—	—	—
6	.262"	.073"	$\frac{3}{64}$"	$\frac{1}{4}$"	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	—	—	—	—	—	—
8	.312"	.087"	$\frac{3}{32}$"	$\frac{1}{4}$"	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	—	—	—	—	—
10	.361"	.101"	$\frac{1}{8}$"	$\frac{1}{4}$"	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	$\frac{7}{8}$"	1"	—	—	—
$\frac{1}{4}$"	.437"	.132"	$\frac{5}{32}$"	—	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	$\frac{7}{8}$"*	1"	—	—	—
$\frac{5}{16}$"	.547"	.166"	$\frac{3}{16}$"	—	$\frac{3}{8}$"	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	$\frac{7}{8}$"*	1"	—	—	—
$\frac{3}{8}$"	.656"	.199"	$\frac{7}{32}$"	—	—	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	$\frac{7}{8}$"*	1"	$1\frac{1}{4}$"*	—	—
$\frac{1}{2}$"	.875"	.265"	$\frac{5}{16}$"	—	—	—	—	—	—	1"*	$1\frac{1}{4}$"*	$1\frac{1}{2}$"*	2"*
$\frac{5}{8}$"	1.0"	.331"	$\frac{3}{8}$"	—	—	—	—	—	—	1"*	$1\frac{1}{4}$"*	$1\frac{1}{2}$"*	2"*

No. 2, No. 4, No. 6, No. 8, and Sizes Marked * Not Standard in U.N.F. Thread.

UNBRAKO SEL-LOK SPRING PINS

Carbon Steel Cadmium Plated



STANDARD PACK AND LENGTHS AVAILABLE

Length	1/16" Diameter	5/64" Diameter	3/32" Diameter	1/8" Diameter	5/32" Diameter	3/16" Diameter	7/32" Diameter	1/4" Diameter	5/16" Diameter	3/8" Diameter	7/16" Diameter	1/2" Diameter	Length
3/16"	1000	1000	—	—	—	—	—	—	—	—	—	—	3/16"
1/4"	1000	1000	1000	—	—	—	—	—	—	—	—	—	1/4"
5/16"	1000	1000	1000	—	—	—	—	—	—	—	—	—	5/16"
3/8"	1000	1000	1000	500	—	—	—	—	—	—	—	—	3/8"
7/16"	1000	1000	1000	500	—	—	—	—	—	—	—	—	7/16"
1/2"	1000	1000	1000	500	500	500	—	—	—	—	—	—	1/2"
9/16"	1000	1000	1000	500	500	500	250	—	—	—	—	—	9/16"
5/8"	1000	1000	1000	500	500	500	250	250	—	—	—	—	5/8"
11/16"	—	—	1000	500	500	500	—	—	—	—	—	—	11/16"
3/4"	1000	1000	1000	500	500	500	250	250	250	100	—	—	3/4"
13/16"	—	—	—	—	—	—	250	250	250	—	—	—	13/16"
7/8"	—	1000	1000	500	500	500	250	250	250	—	—	—	7/8"
15/16"	—	—	—	—	—	—	—	250	250	—	—	—	15/16"
1"	1000	1000	1000	—	—	—	250	250	250	100	100	—	1"
1 1/8"	—	—	—	—	—	—	250	250	250	—	—	—	1 1/8"
1 1/4"	—	—	1000	500	500	500	250	250	250	100	100	100	1 1/4"
1 3/8"	—	—	—	500	500	500	—	250	250	—	—	—	1 3/8"
1 1/2"	—	—	1000	500	500	500	250	250	250	100	100	100	1 1/2"
1 5/8"	—	—	—	500	500	500	—	250	250	—	—	—	1 5/8"
1 3/4"	—	—	—	500	500	500	250	250	250	100	100	100	1 3/4"
1 7/8"	—	—	—	—	—	—	—	250	250	—	—	—	1 7/8"
2"	—	—	—	500	500	500	—	250	250	100	100	100	2"
2 1/4"	—	—	—	—	—	—	—	250	250	100	100	100	2 1/4"
2 1/2"	—	—	—	—	500	250	—	250	250	100	100	100	2 1/2"
2 3/4"	—	—	—	—	—	—	—	250	250	100	100	100	2 3/4"
3"	—	—	—	—	—	—	250	250	250	100	100	100	3"
3 1/4"	—	—	—	—	—	—	—	250	250	100	100	100	3 1/4"
3 1/2"	—	—	—	—	—	—	—	250	250	100	100	100	3 1/2"
3 3/4"	—	—	—	—	—	—	—	—	250	100	100	100	3 3/4"
4"	—	—	—	—	—	—	—	—	250	100	100	100	4"

METRIC THREAD — HIGH TENSILE HEXAGON HEAD — BOLTS — SET SCREWS COUNTERSUNK AND FILLISTER HEAD MACHINE SCREWS — HEXAGON NUTS

Now available from Stock —

SIZE RANGE — DIMENSIONS MM.

HEXAGON HEAD — BOLTS — SET SCREWS

Diameter	3	4	5	6	8	10	12	14	16	18	20
Pitch	0.5	0.7	0.8	1.0	1.25	1.5	1.75	2.0	2.0	2.5	2.5
Length	5-35	6-60	8-70	10-70	10-80	15-100	20-120	25-200	30-200	35-200	40-200

COUNTERSUNK AND FILLISTER HEAD MACHINE SCREWS

Diameter	3	4	5	6	8	10	12
Pitch	0.5	0.7	0.8	1.0	1.25	1.5	1.75
Length	5-60	5-60	8-60	8-70	10-70	15-70	25-50

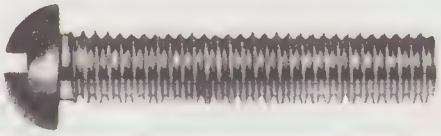
HEXAGON NUTS

2 2.5 3 4 5 6 7 8

10 12 14 16 18 20 22 24

METAL THREAD SCREWS

COUNTERSUNK ROUND RAISED CHEESE
FILLISTER MUSHROOM



STANDARD PACK AND LENGTHS AVAILABLE

	WHITWORTH THREAD	3/32"	1/8"	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	
	B.A. THREAD	6, 5	4	3	2	1, 0	—	—	—	—	—	
	UNC AND UNF	4-40 4-48 5-40 5-44	6-32 6-40	8-32 8-36	10-24 10-32	12-24 12-28 1/4"-20 1/4"-28	5/16"-18 5/16"-24	3/8"-16 3/8"-24	—	—	—	
STEEL	Length 1/4"	144	144	144	144	—	—	—	—	—	—	1/4" Length
	3/8"	144	144	144	144	144	—	—	—	—	—	3/8"
	1/2"	144	144	144	144	144	144	144	—	—	—	1/2"
	5/8"	144	144	144	144	144	144	144	—	—	—	5/8"
	3/4"	144	144	144	144	144	144	144	72	—	—	3/4"
	7/8"	144	144	144	144	144	144	144	72	—	—	7/8"
	1"	144	144	144	144	144	144	144	72	—	—	1"
	1 1/4"	144	144	144	144	144	144	72	72	—	—	1 1/4"
	1 1/2"	144	144	144	144	144	144	72	72	—	—	1 1/2"
	1 3/4"	144	144	144	144	144	144	72	72	—	—	1 3/4"
	2"	144	144	144	144	144	72	72	72	—	—	2"
	2 1/4"	144	144	144	144	144	72	72	72	36	36	2 1/4"
	2 1/2"	144	144	144	144	144	72	72	72	36	36	2 1/2"
	2 3/4"	—	—	—	—	—	—	—	72	36	36	2 3/4"
	3"	144	144	144	144	144	72	72	72	36	36	3"
	3 1/2"	—	—	—	—	—	—	—	—	—	36	3 1/2"
	4"	—	—	—	—	—	—	—	—	36	36	4"
STAINLESS STEEL	1/4"	144	144	144	144	144	—	—	—	—	—	1/4"
	3/8"	144	144	144	144	144	—	—	—	—	—	3/8"
	1/2"	144	144	144	144	144	144	—	—	—	—	1/2"
	5/8"	144	144	144	144	144	144	—	—	—	—	5/8"
	3/4"	144	144	144	144	144	144	—	—	—	—	3/4"
	7/8"	144	144	144	144	144	144	—	—	—	—	7/8"
	1"	144	144	144	144	144	144	—	—	—	—	1"
	1 1/4"	144	144	144	144	144	144	—	—	—	—	1 1/4"
	1 1/2"	144	144	144	144	144	144	—	—	—	—	1 1/2"
	1 3/4"	—	—	—	—	144	144	—	—	—	—	1 3/4"
	2"	—	—	—	—	144	72	—	—	—	—	2"
BRASS	1/4"	144	144	144	144	—	—	—	—	—	—	1/4"
	3/8"	144	144	144	144	144	—	—	—	—	—	3/8"
	1/2"	144	144	144	144	144	144	144	—	—	—	1/2"
	5/8"	144	144	144	144	144	144	144	—	—	—	5/8"
	3/4"	144	144	144	144	144	144	144	72	—	—	3/4"
	7/8"	144	144	144	144	144	144	144	72	—	—	7/8"
	1"	144	144	144	144	144	144	144	72	—	—	1"
	1 1/4"	144	144	144	144	144	144	72	72	—	—	1 1/4"
	1 1/2"	144	144	144	144	144	144	72	72	—	—	1 1/2"
	1 3/4"	144	144	144	144	144	144	72	72	—	—	1 3/4"
	2"	144	144	144	144	144	72	72	72	—	—	2"
	2 1/4"	144	144	144	144	144	72	72	72	—	—	2 1/4"
	2 1/2"	144	144	144	144	144	72	72	72	—	—	2 1/2"
	3"	144	144	144	144	144	72	72	72	—	—	3"

SELF TAPPING SCREWS TYPE A

Lengths $\frac{3}{8}$" to 2" — *Available with Binding, Raised, Round or Countersunk Heads*
Material — Hardened Steel or 305 Stainless Steel

RECOMMENDED HOLE SIZE

Diameter of Screw	Thickness of Metal: No. of Gauge (B.G.)	Thickness of Metal: Thickness Inches	Pierced Hole: Diameter of Hole Required	Drilled or Clean-Punched Hole: Diameter of Hole Required	Drilled or Clean-Punched Hole: Drill Size
	28	.016"	.086"	.086"	No. 44
No. 4	26	.020"	.086"	.086"	No. 44
.112"	24	.025"	.093"	.093"	No. 42
	22	.031"	.098"	.093"	No. 42
	20	.039"	.100"	.098"	No. 40
	28	.016"	.111"	.099"	No. 39
No. 6	26	.020"	.111"	.099"	No. 39
.138"	24	.025"	.111"	.099"	No. 39
	22	.031"	.111"	.101"	No. 38
	20	.039"	.111"	.106"	No. 36
	28	.016"	.121"	.104"	No. 37
	26	.020"	.121"	.104"	No. 37
No. 7	24	.025"	.121"	.110"	No. 35
.155"	22	.031"	.121"	.113"	No. 33
	20	.039"	.121"	.116"	No. 32
	18	.050"	—	.120"	No. 31
	26	.020"	.137"	.113"	No. 33
No. 8	24	.025"	.137"	.113"	No. 33
.165"	22	.031"	.137"	.113"	No. 33
	20	.039"	.137"	.120"	No. 31
	18	.050"	—	.128"	No. 30
	26	.020"	.158"	.128"	No. 30
No. 10	24	.025"	.158"	.128"	No. 30
.191"	22	.031"	.158"	.128"	No. 30
	20	.039"	.158"	.136"	No. 29
	18	.050"	.158"	.149"	No. 25
	22	.031"	.185"	.149"	No. 25
No. 12	20	.039"	.185"	.152"	No. 24
.218"	18	.050"	.185"	.157"	No. 22
	22	.031"	.212"	.189"	No. 12
No. 14	20	.039"	.212"	.191"	No. 11
.251"	18	.050"	.212"	.196"	No. 9

SELF TAPPING SCREWS TYPE Z

Lengths $\frac{3}{8}$" to 2" — *Available with Binding, Raised, Round or Countersunk Heads*
Material — Hardened Steel or 305 Stainless Steel

RECOMMENDED HOLE SIZE

Diam. of Screw (Deci-Equiv.)	In Sheet Steel: Thickness of Metal: No. of Gauge (B.G.)	Thickness of Metal: Thickness Inches	Pierced Hole: Diam. Hole Req'd	Drilled or Clean Punched Hole: Diam. Hole Req'd	Drilled or Clean Punched Hole: Drill Sized	In Aluminium, Die Castings Etc.: Diam. Hole Req'd	In Aluminium, Die Castings Etc.: Drill Size
	28	.016"	.086"	.086"	No. 44		
	26	.020"	.086"	.086"	No. 44		
	24	.025"	.093"	.089"	No. 43		
No. 4	22	.031"	.098"	.093"	No. 42	.104"	No. 37
.112"	20	.039"	.100"	.093"	No. 42		
	18	.050"	—	.096"	No. 41		
	16	.062"	—	.099"	No. 39		
	14	.078"	—	.101"	No. 38		
	28	.016"	.106"	.104"	No. 37		
	26	.020"	.106"	.104"	No. 37		
	24	.025"	.106"	.106"	No. 36		
	22	.031"	.110"	.106"	No. 36		
No. 6	20	.039"	.110"	.110"	No. 35	.128"	No. 30
.137"	18	.050"	—	.111"	No. 34		
	16	.062"	—	.116"	No. 32		
	14	.078"	—	.120"	No. 31		
	12	.099"	—	.128"	No. 30		
	26	.020"	.121"	.116"	No. 32		
	24	.025"	.121"	.116"	No. 32		
	22	.031"	.121"	.116"	No. 32		
	20	.039"	.121"	.116"	No. 32		
No. 7	18	.050"	.121"	.120"	No. 31	.144"	No. 27
.151"	16	.062"	—	.128"	No. 30		
	14	.078"	—	.136"	No. 29		
	12	.099"	—	.140"	No. 28		

Diam. of Screw (Deci-Equiv.)	In Sheet Steel: Thickness of Metal: No. of Gauge (B.G.)	Thickness of Metal: Thickness Inches	Pierced Hole: Diam. Hole Req'd	Drilledor Clean Punched Hole: Diam. Hole Req'd	Drilledor Clean Punched Hole: Drill Sized	In Aluminium, Die Castings Etc.: Diam. Hole Req'd	In Aluminium, Die Castings Etc.: Drill Size
	26	.020"	.131"	—	—		
	24	.025"	.131"	.116"	No. 32		
	22	.031"	.131"	.116"	No. 32		
	20	.039"	.136"	.116"	No. 32		
	18	.050"	.140"	.128"	No. 30		
No. 8	16	.062"	—	.136"	No. 29	.152"	No. 24
.163"	14	.078"	—	.140"	No. 28		
	12	.099"	—	.149"	No. 25		
	10	.125"	—	.149"	No. 25		
	9	.140"	—	.152"	No. 24		
	26	.020"	.144"	.144"	No. 27		
	24	.025"	.144"	.144"	No. 27		
	22	.031"	.144"	.144"	No. 27		
	20	.039"	.147"	.144"	No. 27		
No. 10	18	.050"	.155"	.144"	No. 27	.177"	No. 16
.186"	16	.062"	—	.152"	No. 24		
	14	.078"	—	.157"	No. 22		
	12	.099"	—	.161"	No. 20		
	10	.125"	—	.169"	No. 18		
	9	.140"	—	.169"	No. 18		
	8	.157"	—	.173"	No. 17		
	20	.039"	.185"	.166"	No. 19		
	18	.050"	.185"	.169"	No. 18		
No. 12	16	.062"	—	.177"	No. 16	.199"	No. 8
.212"	14	.078"	—	.182"	No. 14		
	12	.099"	—	.185"	No. 13		
	10	.125"	—	.196"	No. 9		
	9	.140"	—	.196"	No. 9		
	8	.157"	—	.201"	No. 7		
	20	.039"	.209"	.185"	No. 13		
	18	.050"	.209"	.191"	No. 11		
	16	.062"	—	.199"	No. 8		
No. 14	14	.078"	—	.204"	No. 6	.234"	$\frac{15}{64}$"
.243"	12	.099"	—	.209"	No. 4		
	10	.125"	—	.228"	No. 1		
	9	.140"	—	.228"	No. 1		
	8	.157"	—	.234"	$\frac{15}{64}$"		
	$\frac{3}{16}$"	.187"	—	.234"	$\frac{15}{64}$"		
	6	.198"	—	.234"	$\frac{15}{64}$"		

SHAKEPROOF SCREWS

COUNTERSUNK, RAISED, PAN, ROUND OR HEXAGON HEAD

Type 17 for Woodworking or Light Plastics
Type 1 for Sheet Metal
Type 23 for Metal and Plastics
Type 25 for Plastics

Screw No.		2	3	4	5	6	8	10	12	1/4"	5/16"	3/8"
Threads Per Inch	Coarse	56	48	40	40	32	32	24	24	20	18	16
	Fine	64	56	48	44	40	36	32	28	28	24	24

Standard Pack 1000 for Stock items. Minimum Manufacturing Quantities for Non Standard size on Application.

Screw No.	Lengths Available
2	3/16" 1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8"
3	1/4" 5/16" 3/8" 7/16" 1/2" 9/16" 5/8"
4	1/4" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1
6	5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1 1 1/8" 1 1/4" 1 1/2"
8	5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1 1 1/8" 1 1/4" 1 1/2" 1 3/4"
10	3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 1/2" 1 3/4"
12	5/16" 3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 1/2" 1 3/4"
1/4"	3/8" 7/16" 1/2" 9/16" 5/8" 3/4" 7/8" 1" 1 1/8" 1 1/4" 1 1/2" 1 3/4"
5/16"	1/2" 9/16" 5/8" 3/4" 7/8" 1 1 1/8" 1 1/4" 1 1/2" 1 3/4"
3/8"	5/8" 3/4" 7/8" 1 1 1/8" 1 1/4" 1 1/2" 1 3/4" 2" 2 1/4" 2 1/2" 3"

TEKS SELF DRILLING SCREWS

Standard Teks for heavy Sheet Metal and Light Structures.
Super Teks for heavier Structural Fastening.
Cross Recess Heads, Pan, Flat, Oval and Wafer, Unslotted Hexagon and Hexagon Washer.

Screw No.	Threads per Inch		
	Coarse	Fine	
6	20	32	3/8" 1/2" 5/8" 3/4"
8	18	32	1/2" 5/8" 3/4" 7/8" 1" 1 1/4"
10	16	24	5/8" 3/4" 7/8" 1" 1 1/4" 1 1/2" 1 3/4"
1/4"	14	20	3/4" 7/8" 1" 1 1/4" 1 1/2" 1 3/4" 2"

TAP-TITE

Tri-crest taptite structural thread rolling screws for Steel, Brass, Copper, Lead, Stainless Steel, Aluminium Zinc Magnesium — All Ductile metals.

Screw Number	4	5	6	8	10	10	12	1/4"	5/16"
Threads per Inch	40	40	32	32	24	32	24	20	18

Available in Lengths up to 2".

WOOD SCREWS

Standard Gauges

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 22

Standard Pack

144

Nickle Plated on Brass-Round Head, Raised Head, Countersunk, are available from stock — Other plated finishes can be supplied at short notice.

SIZE RANGE

COUNTERSUNK HEAD

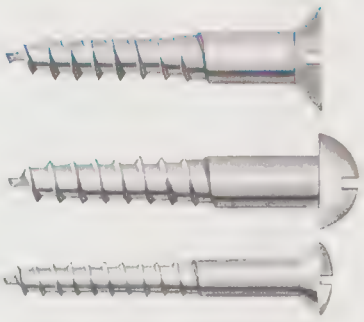
Steel $\frac{1}{4}$″ x 2 gauge to 6″ x 20 gauge
Brass $\frac{1}{4}$″ x 2 gauge to 5″ x 20 gauge
Monel $\frac{1}{2}$″ x 6 gauge to 3″ x 12 gauge

ROUND HEAD

Steel $\frac{1}{4}$″ x 2 gauge to $3\frac{1}{2}$″ x 14 gauge
Brass $\frac{1}{4}$″ x 2 gauge to 4″ x 16 gauge

RAISED HEAD

Steel $\frac{3}{8}$″ x 3 gauge to 2″ x 12 gauge
Brass $\frac{3}{8}$″ x 3 gauge to 2″ x 14 gauge



Gauge	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20
Nominal Decimal Equivalent	.082	.094	.108	.122	.136	.150	.164	.178	.192	.206	.220	.248	.276	.304	.332

STEEL COTTER PINS

To Australian Standard B175-1963 (BS1574-1958) Measured under Eye

NOMINAL DIAMETER

$\frac{3}{64}$″ $\frac{1}{16}$″ $\frac{5}{64}$″	$\frac{3}{32}$″ $\frac{7}{64}$″ $\frac{1}{8}$″	$\frac{9}{64}$″	$\frac{5}{32}$″ $\frac{3}{16}$″	$\frac{7}{32}$″ $\frac{1}{4}$″	$\frac{9}{32}$″ $\frac{5}{16}$″	$\frac{3}{8}$″	$\frac{7}{16}$″ $\frac{1}{2}$″
$\frac{1}{4}$″	$\frac{1}{4}$″*	—	$\frac{1}{4}$″	$\frac{1}{4}$″	—	—	—
$\frac{3}{8}$″*	$\frac{3}{8}$″*	—	$\frac{3}{8}$″*	$\frac{3}{8}$″	—	—	—
$\frac{1}{2}$″*	$\frac{1}{2}$″*	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	—	—	—
$\frac{5}{8}$″*	$\frac{5}{8}$″	$\frac{5}{8}$″	$\frac{5}{8}$″*	—	—	—	—
$\frac{3}{4}$″	$\frac{3}{4}$″*	$\frac{3}{4}$″	$\frac{3}{4}$″*	$\frac{3}{4}$″*	—	—	—
$\frac{7}{8}$″*	—	—	$\frac{7}{8}$″*	—	$\frac{7}{8}$″	—	—
1″	1″*	1″	1″*	1″*	—	—	—
$1\frac{1}{8}$″*	—	—	$1\frac{1}{8}$″*	—	$1\frac{1}{8}$″	—	—
$1\frac{1}{4}$″	$1\frac{1}{4}$″*	$1\frac{1}{4}$″	$1\frac{1}{4}$″	$1\frac{1}{4}$″*	—	$1\frac{1}{4}$″	—
$1\frac{3}{8}$″*	—	—	$1\frac{3}{8}$″*	—	$1\frac{3}{8}$″*	—	—
$1\frac{1}{2}$″	$1\frac{1}{2}$″*	$1\frac{1}{2}$″	$1\frac{1}{2}$″	$1\frac{1}{2}$″*	—	$1\frac{1}{2}$″	$1\frac{1}{2}$″
$1\frac{5}{8}$″*	—	—	$1\frac{5}{8}$″*	—	$1\frac{5}{8}$″	—	—
—	$1\frac{3}{4}$″*	$1\frac{3}{4}$″	$1\frac{3}{4}$″	$1\frac{3}{4}$″*	—	$1\frac{3}{4}$″	—
$1\frac{7}{8}$″*	—	—	$1\frac{7}{8}$″*	—	$1\frac{7}{8}$″*	—	—
2″	2″*	2″	2″*	2″*	2″	2″	2″
$2\frac{1}{2}$″	$2\frac{1}{4}$″*	$2\frac{1}{4}$″	$2\frac{1}{4}$″*	$2\frac{1}{4}$″*	$2\frac{1}{4}$″*	$2\frac{1}{4}$″	—
$2\frac{1}{2}$″	$2\frac{1}{2}$″*	$2\frac{1}{2}$″	$2\frac{1}{2}$″*	$2\frac{1}{2}$″*	$2\frac{1}{2}$″	$2\frac{1}{2}$″	$2\frac{1}{2}$″
$2\frac{3}{4}$″	$2\frac{3}{4}$″*	$2\frac{3}{4}$″	$2\frac{3}{4}$″	$2\frac{3}{4}$″	$2\frac{3}{4}$″	$2\frac{3}{4}$″	—
—	3″	—	3″	3″	3″	3″	3″
—	$3\frac{1}{4}$″	—	$3\frac{1}{4}$″	$3\frac{1}{4}$″	$3\frac{1}{4}$″	$3\frac{1}{4}$″	—
—	$3\frac{1}{2}$″	—	$3\frac{1}{2}$″	$3\frac{1}{2}$″*	—	—	$3\frac{1}{2}$″
—	$3\frac{3}{4}$″	—	—	—	$3\frac{3}{4}$″	$3\frac{3}{4}$″	—
—	—	—	—	4″	—	—	4″
—	—		—	—	$4\frac{1}{4}$″	$4\frac{1}{4}$″	—
—	—	—	—	$4\frac{1}{2}$″	—	—	$4\frac{1}{2}$″
—	—	—	—	—	$4\frac{3}{4}$″	$4\frac{3}{4}$″	—
—	—	—	—	5″	—	—	5″
—	—	—	—	—	$5\frac{1}{4}$″	$5\frac{1}{4}$″	—
—	—	—	—	$5\frac{1}{2}$″	—	—	—

* Sizes Marked are Available in Brass.

L469 WIRE NAILS

BRIGHT WIRE NAILS — JOLT HEAD & FLAT HEAD

Size	6" x 3	6" x 4	6" x 5	5" x 4	5" x 5	5" x 6	4" x 6	4" x 7	4" x 8	3" x 8	3" x 9	3" x 10	2½" x 10	2½" x 11	2½" x 12
No. per lb.	11	13	16	16	20	24	28	35	41	54	67	80	95	123	150

Size	2" x 10	2" x 11	2" x 12	2" x 13	2" x 14	1¾" x 12	1¾" x 13	1½" x 12	1½" x 13	1½" x 14	1½" x 15	1¼" x 14	1¼" x 15	1" x 16	¾" x 16
No. per lb.	130	150	183	241	330	208	266	234	308	460	555	530	670	1,005	1,354

DUPLEX NAILS

Size	2" x 12	2"x 11	2½" x 10	3" x 9	3½" x 8	4" x 6
No. per lb.	161	134	81	60	41	26

EVENDEN SPRING HEAD ROOFING NAILS

Size	1½"	1¾"	2"	2¼"	2½"
No. per lb.	87	77	70	62	56

BRIGHT CLOUT TACKS

Size	½" x 13	⅝" x 12	¾" x 12	1" x 12	1¼" x 12	1½" x 12
No. per lb.	825	467	409	332	264	218

GALVANISED CLOUT TACKS

Size	½" x 13	⅝" x 13	⅝" x 12	¾" x 12	1" x 12	1¼" x 12	1½" x 12
No. per lb.	780	386	427	369	299	238	196

WIRE BRADS — PANEL PINS

Size	½" x 20	⅝" x 19	¾" x 18	1" x 18	1" x 17	1¼" x 16
No. per lb.	6,386	3,043	2,466	1,833	1,368	840

BRASS ESCUTCHEON PINS

Size	½" x 16G	⅝" x 16G	¾" x 16G
No. per lb.	1,696	1,371	1,206

STAPLES 1½" x 8 1½" x 9 1" x 10 ¾" x 12 ¾" x 14 ⅝" x 14 ½" x 14, in 7 lb Packets

CEMENT SHEET 1" x 14 1¼" x 14 1½" x 14

COPPER CUT TACKS ⅜" ½" ⅝" ¾" ⅞" in 1 lb. packets

BLUED CUT TACKS ⅝" ½" ⅝" ¾" in 1 lb. packets

L470 TINMEN'S RIVETS

Number	6	7	8	9	10	11	12	13	14	15	16	17	18
Weight per 1000	14 oz.	1lb	1¼	1½	2	2½	3	4	5	6	7	8	10 lb
Drilling	—	—	1/8"	9/64"	5/32"	5/32"	11/64"	13/64"	7/32"	9/32"	21/64"	1/4"	—

L471 COPPER RIVETS

FLAT HEAD	Gauge	10	9	8	6	4					
	Length	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1¼"	1½"	2"
ROUND HEAD COUNTERSUNK HEAD	Diameter	1/8"	5/32"	3/16"	1/4"	5/16"	3/8"					
	Length	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1¼"	1½"	2"
BINDER HEAD BINDER HEAD RIVET AND WASHER	Gauge	10	9	8	6	4					
	Length	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1¼"	1½"	2"

L472 ALUMINIUM RIVETS

½ lb. Packets

COUNTERSUNK HEAD									MUSHROOM HEAD								
Diameter	Length								Diameter	Length							
1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	—	1"	—	1/8"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"	—
5/32"	—	3/8"	1/2"	5/8"	3/4"	7/8"	1"	—	5/32"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"	—
3/16"	—	3/8"	1/2"	5/8"	3/4"	—	1"	—	3/16"	—	—	3/8"	7/16"	1/2"	5/8"	3/4"	1"	1¼"
1/4"	—	—	1/2"	5/8"	3/4"	—	1"	1¼"	1/4"	—	—	3/8"	7/16"	1/2"	5/8"	3/4"	1"	1¼"

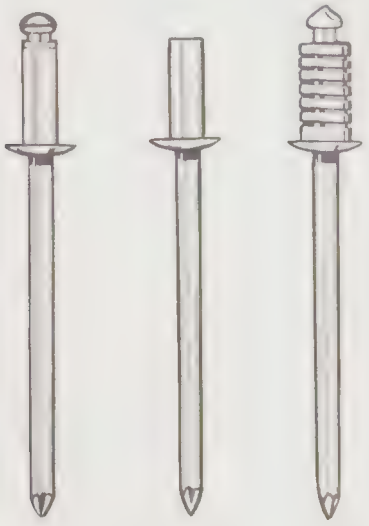
Galvanising, or Electroplating in any finish, can be arranged to suit your requirements.

1/4 DIA. x 5/8

"POP" RIVETS Including "Pop" Open Rivets, "Pop" Sealed Rivets, "Pop" Grooved Rivets

RECOMMENDED DRILL SIZES FOR "POP" RIVETS

Rivet Diameter	Drill No.	Drill Diameter
3/32"	41	.096"
7/64"	33	.113"
1/8"	30	.128"
5/32"	20	.161"
11/64"	11	.191"
7/32"	2	.222"
1/4"	F	.257"



OPEN RIVET | SEALED RIVET | GROOVED RIVET

"POP" GROOVED RIVETS "SERREX"

for use in Soft and Brittle Material

Rivet Diameter	Rivet Code Number
1/8"	TAS/D 435
5/32"	TAS/D 529
3/32"	TAS/D 545
3/16"	TAS/D 657

"POP" OPEN RIVETS

MONEL			ALUMINIUM ALLOY		
Rivet Diam.	Rivet Code No.	Break Stem Mandrels Domed Head TLP/D.-BS. Material Thickness	Rivet Diam.	Rivet Code No.	Break Stem Mandrels Domed Head TAP/D.-BS. Material Thickness
7/64"	319	.02"—.07"	3/32"	315	—.05"
	321	.07"—.09"		320	.02" —.07"
				329	.071"—.17"
1/8"	413	—.05"	1/8"	414	.01" —.05"
	419	.02"—.07"		420	.02" —.07"
	424	.07"—.12"		423	.071"—.10"
	429	.12"—.17"		429	.101"—.17"
	435	.17"—.23"		435	.171"—.23"
	440	.23"—.28"		440	.231"—.28"
5/32"	519	.02"—.05"	5/32"	518	.02" —.05"
	524	.51"—.10"		523	.051"—.10"
	530	.10"—.16"		529	.101"—.16"
	537	.16"—.23"		537	.161"—.23"
	540	.23"—.26"		545	.231"—.31"
	545	.26"—.31"		550	.311"—.36"
3/16"	624	.02"—.09"	3/16"	625	.02" —.09"
	630	.09"—.15"		629	.091"—.13"
	636	.15"—.20"		635	.131"—.19"
	639	.20"—.23"		640	.191"—.22"
	650	.23"—.34"		649	.221"—.30"
	665	.34"—.49"		657	.301"—.38"
	675	.49"—.59"		665	.381"—.46"
				675	.461"—.59"
1/4"	850	.15"—.30"			
	870	.30"—.50"	7/32"	749	.231"—.32"

Rivet Sizes are available in **Mild Steel** as well as **Monel Metal**

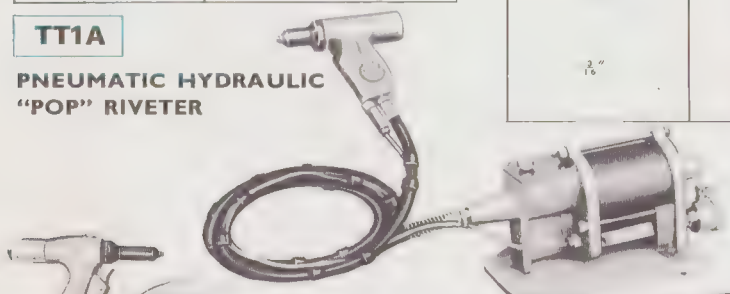
"POP" SEALED RIVETS ("IMEX")

for Pressure Application up to 500 lb./sq. in.

River Diameter	River Code Number		Material Thickness
	Aluminium Alloy	Copper	
1/8"	AD 42	CD 42	up to .062"
	AD 44	CD 44	.062" to .125"
	AD 46	CD 46	.125" to .187"
	AD 48	—	.187" to .250"
	AD 410	CD 410	.250" to .312"
5/32"	AD 54	—	up to .125"
	AD 56	CD 56	.125" to .187"
	AD 58	—	.187" to .250"
	AD 510	—	.250" to .312"
3/16"	AD 64	—	up to .125"
	AD 66	—	.125" to .187"
	AD 68	CD 68	.187" to .250"
	AD 612	—	.312" to .375"

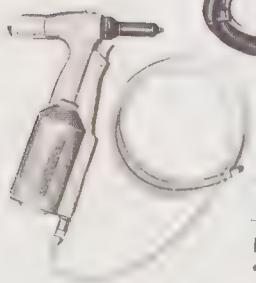
TT1A

PNEUMATIC HYDRAULIC "POP" RIVETER



TT17

RIVETING PLIERS Hand Tool



TT7A

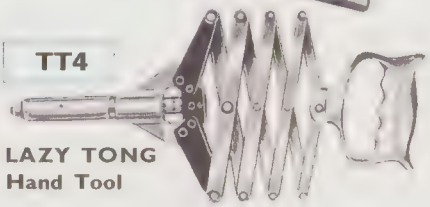
PNEUMATIC "POP" RIVETER

TT55A

RIVETING PLIERS Hand Tool

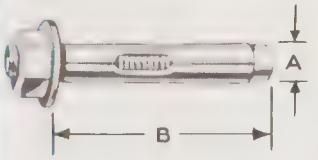
TT4

LAZY TONG Hand Tool

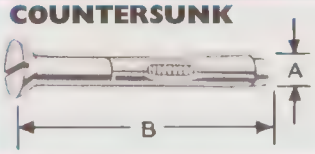


DYNABOLT MASONRY ANCHORS

HEX. NUT

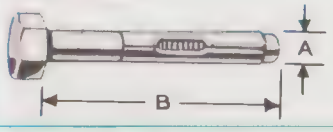


COUNTERSUNK

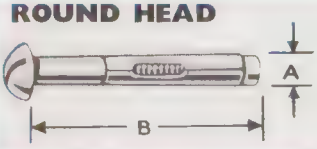


TIE WIRE

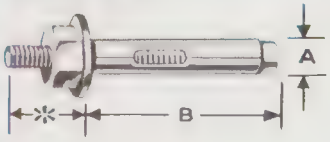
HEX. HEAD



ROUND HEAD



STUD BOLT



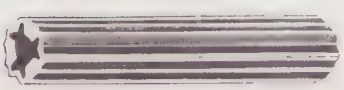
Catalogue Number	"A" Anchor Size & Hole Diam.	"B" Anchor Length	U.N.C. Thread Size	Min. Hole Depth	Will Fasten Material Thicknesses Up To
D 2505	$\frac{1}{4}$"	$\frac{5}{8}$"	$\frac{3}{16}$"	$\frac{1}{2}$"	$\frac{1}{8}$"
D 2513	$\frac{1}{4}$"	$1\frac{3}{8}$"	$\frac{3}{16}$"	1"	$\frac{3}{8}$"
D 2522	$\frac{1}{4}$"	$2\frac{1}{4}$"	$\frac{3}{16}$"	1"	$1\frac{1}{4}$"
D 3114	$\frac{5}{16}$"	$1\frac{1}{2}$"	$\frac{1}{4}$"	1"	$\frac{1}{2}$"
D 3124	$\frac{5}{16}$"	$2\frac{1}{2}$"	$\frac{1}{4}$"	1"	$1\frac{1}{2}$"
D 3134	$\frac{5}{16}$"	$3\frac{1}{2}$"	$\frac{1}{4}$"	1"	$2\frac{1}{2}$"
D 3717	$\frac{3}{8}$"	$1\frac{7}{8}$"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$\frac{3}{8}$"
D 3730	$\frac{3}{8}$"	3"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$1\frac{1}{2}$"
D 3740	$\frac{3}{8}$"	4"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$2\frac{1}{2}$"
D 5022	$\frac{1}{2}$"	$2\frac{1}{4}$"	$\frac{3}{8}$"	$1\frac{1}{2}$"	$\frac{3}{4}$"
D 5030	$\frac{1}{2}$"	3"	$\frac{3}{8}$"	$1\frac{1}{2}$"	$1\frac{1}{2}$"
D 5040	$\frac{1}{2}$"	4"	$\frac{3}{8}$"	$1\frac{1}{2}$"	$2\frac{1}{2}$"
D 6222	$\frac{5}{8}$"	$2\frac{1}{4}$"	$\frac{1}{2}$"	2"	$\frac{1}{4}$"
D 6240	$\frac{5}{8}$"	4"	$\frac{1}{2}$"	2"	2"
D 6256	$\frac{5}{8}$"	$5\frac{1}{4}$"	$\frac{1}{2}$"	2"	$3\frac{3}{4}$"
D 7524	$\frac{3}{4}$"	$2\frac{1}{2}$"	$\frac{5}{8}$"	2"	$\frac{1}{2}$"
D 7540	$\frac{3}{4}$"	4"	$\frac{5}{8}$"	2"	2"
D 7556	$\frac{3}{4}$"	$5\frac{1}{4}$"	$\frac{5}{8}$"	2"	$3\frac{3}{4}$"
D 2511F	$\frac{1}{4}$"	$1\frac{1}{8}$"	$\frac{3}{16}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
D 2520F	$\frac{1}{4}$"	2"	$\frac{3}{16}$"	1"	1"
D 2530F	$\frac{1}{4}$"	$2\frac{3}{4}$"	$\frac{3}{16}$"	1"	$1\frac{3}{4}$"
D 2540F	$\frac{1}{4}$"	$3\frac{3}{4}$"	$\frac{3}{16}$"	1"	$2\frac{3}{4}$"
D 3124F	$\frac{5}{16}$"	$2\frac{3}{8}$"	$\frac{1}{4}$"	1"	$1\frac{3}{8}$"
D 3134F	$\frac{5}{16}$"	$3\frac{3}{8}$"	$\frac{1}{4}$"	1"	$2\frac{3}{8}$"
D 3726F	$\frac{3}{8}$"	$2\frac{1}{2}$"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$1\frac{1}{2}$"
D 3740F	$\frac{3}{8}$"	$3\frac{1}{4}$"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$2\frac{1}{2}$"
D 2513TW	$\frac{1}{4}$"	$1\frac{3}{8}$"	$\frac{3}{16}$"	$1\frac{3}{8}$"	$\frac{3}{16}$" hole
D 3114TW	$\frac{5}{16}$"	$1\frac{1}{2}$"	$\frac{1}{4}$"	$1\frac{1}{2}$"	$\frac{1}{4}$" hole
D 2511H	$\frac{1}{4}$"	$1\frac{1}{8}$"	$\frac{3}{16}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
D 2520H	$\frac{1}{4}$"	2"	$\frac{3}{16}$"	1"	1"
D 2526H	$\frac{1}{4}$"	$2\frac{3}{4}$"	$\frac{3}{16}$"	1"	$1\frac{3}{4}$"
D 2536H	$\frac{1}{4}$"	$3\frac{3}{4}$"	$\frac{3}{16}$"	1"	$2\frac{3}{4}$"
D 3123H	$\frac{5}{16}$"	$2\frac{3}{8}$"	$\frac{1}{4}$"	1"	$1\frac{3}{8}$"
D 3133H	$\frac{5}{16}$"	$3\frac{3}{8}$"	$\frac{1}{4}$"	1"	$2\frac{3}{8}$"
D 3724H	$\frac{3}{8}$"	$2\frac{1}{2}$"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$1\frac{1}{2}$"
D 3736H	$\frac{3}{8}$"	$3\frac{3}{4}$"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$2\frac{1}{2}$"
D 2511R	$\frac{1}{4}$"	$1\frac{1}{8}$"	$\frac{3}{16}$"	$\frac{5}{8}$"	$\frac{1}{2}$"
D 2520R	$\frac{1}{4}$"	2"	$\frac{3}{16}$"	1"	1"
D 2526R	$\frac{1}{4}$"	3"	$\frac{3}{16}$"	1"	2"
D 2536R	$\frac{1}{4}$"	4"	$\frac{3}{16}$"	1"	3"
D 3123R	$\frac{5}{16}$"	$2\frac{1}{2}$"	$\frac{1}{4}$"	1"	$1\frac{1}{2}$"
D 3133R	$\frac{5}{16}$"	$3\frac{1}{2}$"	$\frac{1}{4}$"	1"	$2\frac{1}{2}$"
D 3724R	$\frac{3}{8}$"	$2\frac{1}{2}$"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$1\frac{1}{2}$"
D 3736R	$\frac{3}{8}$"	4"	$\frac{5}{16}$"	$1\frac{1}{4}$"	$2\frac{3}{4}$"
D 2513-1	$\frac{1}{4}$"	$1\frac{3}{8}$"	$\frac{3}{16}$"	$1\frac{3}{8}$"	1"
D 3114-1	$\frac{5}{16}$"	$1\frac{1}{2}$"	$\frac{1}{4}$"	$1\frac{1}{2}$"	1"
D 3717-1	$\frac{3}{8}$"	$1\frac{7}{8}$"	$\frac{5}{16}$"	$1\frac{7}{8}$"	1"
D 5022-1	$\frac{1}{2}$"	$2\frac{1}{4}$"	$\frac{3}{8}$"	$2\frac{1}{4}$"	1"
D 6220-2	$\frac{5}{8}$"	2"	$\frac{1}{2}$"	2"	2"

Fifth Digit of Order No. represents thread length above work surface in inches

How to read Dynabolt Catalogue Numbers

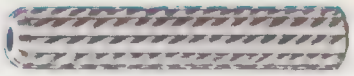
First and Second Digit = Diameter in Decimals. Third Digit = Overall Length in inches.
Fourth Digit = Fractional Length $\frac{1}{8}$" increments. Letters = Head Nomenclature

L473 EXPANDET SCREW ANCHORS



Screw Size	Expandet Colour	Drill Size	Standard Pack	Length Available
1-2-3	Yellow	$\frac{5}{32}$"	50	1"
4-5-6	White	$\frac{3}{16}$"	50	1" $1\frac{1}{2}$"
8-9	Red	$\frac{7}{32}$"	50	1" $1\frac{1}{2}$"
10-12	Green	$\frac{1}{4}$"	50	1" $1\frac{1}{4}$" $1\frac{1}{2}$" 2"
13-15	Blue	$\frac{5}{16}$"	50	1" $1\frac{1}{2}$" 2" $2\frac{1}{4}$"
16-18	Orange	$\frac{3}{8}$"	25	$1\frac{1}{2}$" 2" $2\frac{1}{2}$"
20-24	Grey	$\frac{7}{16}$"	25	2" $2\frac{1}{2}$"
$\frac{7}{16}$"-$\frac{1}{2}$"	Black	$\frac{1}{2}$"	12	$2\frac{1}{2}$" 3" $3\frac{1}{2}$"

MASONRY ANCHORS



L474 RAWLPLUGS

No. 6, 8, 10, 12 and 14 Rawlplugs are available in boxes of Assorted Lengths.

Rawlplug Size	Drill Size	To Suit Wood Screw	Lengths Available	Standard Pack
3	1/8"	3, 2, 1	1/2" 5/8" 3/4" 1"	100
6	5/32"	6, 5, 4	1/2" 5/8" 3/4" 1" 1 1/4" 1 1/2"	100
8	3/16"	8, 7	5/8" 3/4" 1" 1 1/4" 1 1/2" 1 3/4" 2"	100
10	7/32"	10, 9	3/4" 1" 1 1/4" 1 1/2" 1 3/4" 2"	100
12	1/4"	12, 11	1" 1 1/4" 1 1/2" 1 3/4" 2"	100
14	9/32"	14, 13	1" 1 1/4" 1 1/2" 1 3/4" 2"	100
16	5/16"	16, 15	1" 1 1/2" 2" 2 1/2"	100
18	11/32"	18, 17	1 1/2" 2" 2 1/2"	50
20	3/8"	20, 19	1 1/2" 2" 2 1/2"	50

L475 WHITE BRONZE PLUGS

Metal plugs for high Temperature, Corrosive or Moist Applications. Size Range and Lengths as for Rawlplugs

L476 RAWLPLASTIC

For filling ragged and irregular holes — 3 oz. tin, 1 lb. tin

L477 PLASTIC WALLPLUGS

Size	6	8	10	12	14
Colour Code	Red	Green	Blue	Yellow	Black
6" Lengths per Pack	12	11	9	7	6
Boxes of 100 Length Available	1/2" 3/4" 1"	3/4" 1" 1 1/2"	1" 1 1/2" 2"	1" 1 1/2" 2"	1 1/2" 2" —

L478 RAWLSET ANCHORS

M.T. Screw Size	5/32"	3/16"	1/4"	5/16"
Drill Size	7/32"	1/4"	11/32"	3/8"
Standard Pack	100	100	50	50

L479 RAWLNUTS Boxes of 50

Type No.	316	316L	14	14L	516
Screw Size	3/16"	3/16"	1/4"	1/4"	5/16"
Length of Screw	1 1/4"	2"	—	—	—
Drill Size	3/8"	3/8"	1/2"	1/2"	1 1/16"

L480 RAWLANCHORS

Screw Size	Length of Screw	Drill Size	Wall Thickness Min.	Wall Thickness Max.	Length Overall
1/8"	1 1/8"	7/32"	3/32"	3/8"	7/8"
3/16"	2"	7/32"	3/16"	3/16"	1 1/4"
3/16"	1 1/2"	3/16"	3/16"	3/8"	1 3/8"
1/4"	2 1/4"	3/8"	1/4"	7/8"	1 11/16"

L481 SPRING TOGGLE Cadmium Plated

1/8", 3/16" and 1/4" M.T. Screws
Drill Size 1/2"
12 per box

L482 GRAVITY TOGGLE

Cadmium Plated
1/8", 3/16" and 1/4" M.T. Screws.
Drill Size 1/2" 12 per box

L483 RAWLOK

Bolt Diam.	1/4"	5/16"	3/8"	1/2"
Drill Size	3/8"	1/2"	5/8"	3/4"
Standard Pack	100	50	50	50

L484 RAWLBOLTS (Expansion Bolts)

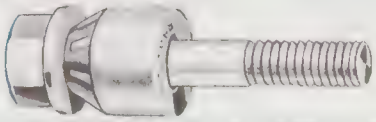
Bolt Diameter	Drill Size	Shield Length	Maximum Load at Point of Failure
3/16"	11/32"	1 1/2"	1,200 lbs.
1/4"	11/32"	1 7/8"	2,240 lbs.
5/16"	13/32"	2"	4,200 lbs.
3/8"	7/16"	2 1/4"	5,700 lbs.
1/2"	15/32"	2 7/8"	9,500 lbs.
5/8"	1 9/32"	4"	16,500 lbs.
3/4"	1 7/16"	5"	24,300 lbs.
1"	1 3/4"	6 3/4"	42,800 lbs.

L485 DUPLEX STUD ANCHORS

Bolt Diameter	Drill Size	Shield Length	Maximum Load at point of failure
3/8"	23/32"	1 7/8"	5600 lbs.
1/2"	15/16"	2 5/16"	9,500 lbs.
5/8"	1 9/32"	3"	19,800 lbs
3/4"	1 7/16"	3 1/2"	25,000 lbs.
1"	1 3/4"	4 1/8"	44,000 lbs.

MASONRY ANCHORS

L486 RAWLPLUG BOLT ANCHORS



Bolt Diam.	¼″	⅜″	½″	⅝″	¾″	1″	1¼″
Drill Size	⅜″	7/16″	1½″	1⅝″	1⅞″	2″	2½″

L487 RAWLINSERTS

Insert No.	1	2	3	4
Length	1″	2″	1″	2″
Width	¾″	¾″	¾″	¾″
Depth	1½	1½″	1″	1″

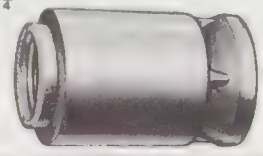
L488 RAWL SOCKETS

Bolt Diam.	¼″	5/16″	⅜″	½″	⅝″	¾″	1″
Length Overall	1¼″	2″	2⅝″	3⅜″	4″	4½″	6″
Diameter of Bottom Flange	7/16″	11/16″	1″	1⅜″	1⅜″	1⅝″	2 1/16″

L489 LOXIN
Rust-Proofed

Bolt Diam.	Shield Length	Drill Diam.	Standard Pack	Rated Working Load	Maximum Load at Point of Failure
¼″	1¼″	½″	100	500 lbs.	2,620 lbs.
5/16″	2″	⅝″	100	700 lbs.	5,250 lbs.
⅜″	2″	⅝″	100	800 lbs.	5,250 lbs.
½″	2½″	⅞″	50	1,500 lbs.	10,200 lbs.
⅝″	3″	1″	25	1,800 lbs.	11,900 lbs.
¾″	3½″	1⅛″	25	2,500 lbs.	16,000 lbs.

L490 LOXIN SETTING TOOL
Sizes ¼″ 5/16″ ⅜″ ½″ ⅝″ ¾″



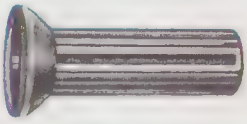
L491 TAMPIN
Non-Corrosive

Screw Size	Hole Diam.	Hole Depth	Standard Pack	Rated Working Load	Maximum Load at Point of Failure
3/16″	⅜″	⅜″	100	200 lbs.	1,030 lbs.
¼″	½″	7/16″	50	400 lbs.	1,900 lbs.
⅜″	¾″	1½″	50	800 lbs.	3,500 lbs.
½″	⅞″	1½″	50	1,200 lbs.	5,200 lbs.
⅝″	1⅛″	2″	50	1,500 lbs.	7,400 lbs.

L492 TAMPIN TOOL
Sizes 3/16″ ¼″ ⅜″ ½″ ⅝″

L493 TOGGLE BOLT
3/16″, 3″, 4″, 6″
Drill Size ½″

L494 SCRUIN
Non-Corrosive



Wood Screw Size	M.T. Screw Size	Shield Length	Drill Size	Standard Pack
6-8	⅛″-3/16″	⅜″	¼″	100
6-8	⅛″-3/16″	1½″	¼″	100
10-12-14	3/16″-¼″	1″	5/16″	100
10-12	3/16″-¼″	1½″	5/16″	100
16-18	5/16″	1½″	⅜″	50
20-22-24	⅜″	1¾″	7/16″	50

L495 DRYVIN
Cadmium Plated

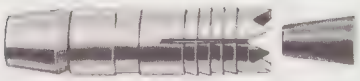
Shield Diam.	Shield Length	Drill Size	Standard Pack	Rated Working Load	Maximum Load at Point of Failure
3/16″	7/8″	3/16″	100	130 lbs.	480 lbs.
3/16″	1½″	3/16″	100	150 lbs.	1,400 lbs.
¼″	1″	¼″	100	200 lbs.	580 lbs.
¼″	1½″	¼″	100	300 lbs.	1,100 lbs.
¼″	1½″	¼″	100	350 lbs.	1,250 lbs.
5/16″	2½″	5/16″	100	500 lbs.	1,740 lbs.
5/16″	2¾″	5/16″	100	500 lbs.	1,950 lbs.
⅜″	2″	⅜″	100	700 lbs.	2,850 lbs.
⅜″	3½″	⅜″	50	700 lbs.	2,300 lbs.
½″	2½″	½″	50	1,200 lbs.	3,550 lbs.

L496 TAP-IT

COUNTERSUNK, ROUND OR MUSHROOM HEAD

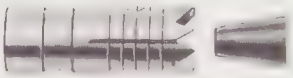
Size 3/16″ x 1″, 1½″; ¼″ x ¾″, 1″, 1½″
Average Tensile Load, 300 lbs.

TERRIER SELF DRILLING MASONRY ANCHORS



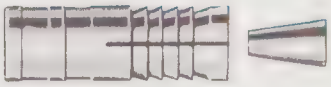
SNAP OFF TYPE
for use with Electric or Pneumatic Hammer

Catalogue Number	Whitworth Thread Size
SO 4	1/4"
SO 5	5/16"
SO 6	3/8"
SO 8	1/2"
SO 10	5/8"
SO 12	3/4"



FLUSH END TYPE
for hand Setting

Catalogue Number	Whitworth Thread Size
FE 4	1/4"
FE 5	5/16"
FE 6	3/8"
FE 8	1/2"



PLUG-IN
Hardened Steel or Manganese Bronze for use in Drilled Holes

Catalogue Number		Whitworth Thread Size
Steel	Bronze	
PL 4	MB 4	1/4"
PL 5	MB 5	5/16"
PL 6	MB 6	3/8"
PL 8	MB 8	1/2"
PL 10	MB 10	5/8"

SETTING PUNCHES

for Setting and hand Drilling Snapoff Anchors

Catalogue Number	Size
SSP 4	1/4"
SSP 5	5/16"
SSP 6	3/8"
SSP 8	1/2"
SSP 10	5/8"
SSP 12	3/4"

for setting flush End Anchors

Catalogue Number	Size
SP 4	1/4"
SP 5	5/16"
SP 6	3/8"
SP 8	1/2"
SP 10	5/8"

Plug Punches for Plug-In Anchors

Catalogue Number	Size
PP 4	1/4"
PP 5	5/16"
PP 6	3/8"
PP 8	1/2"
PP 10	5/8"

HAMMER CHUCKS

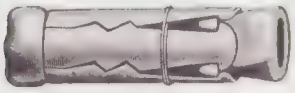
All Chucks Complete with handle/drift.

for Electric or Pneumatic Hammers.
Comprises (1) Chuck, (2) Adaptor, (3) Handle/Drift

Catalogue Number	C4	C5	C6	C8	C10	C12
Anchor Size	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"
Colour	Blue	Silver	Green	Red	Gold	Grey

Hammer adaptors for Electric or Pneumatic Hammers Supplied to suit Hammer Brand and Model

SHURE-SET ANCHORS

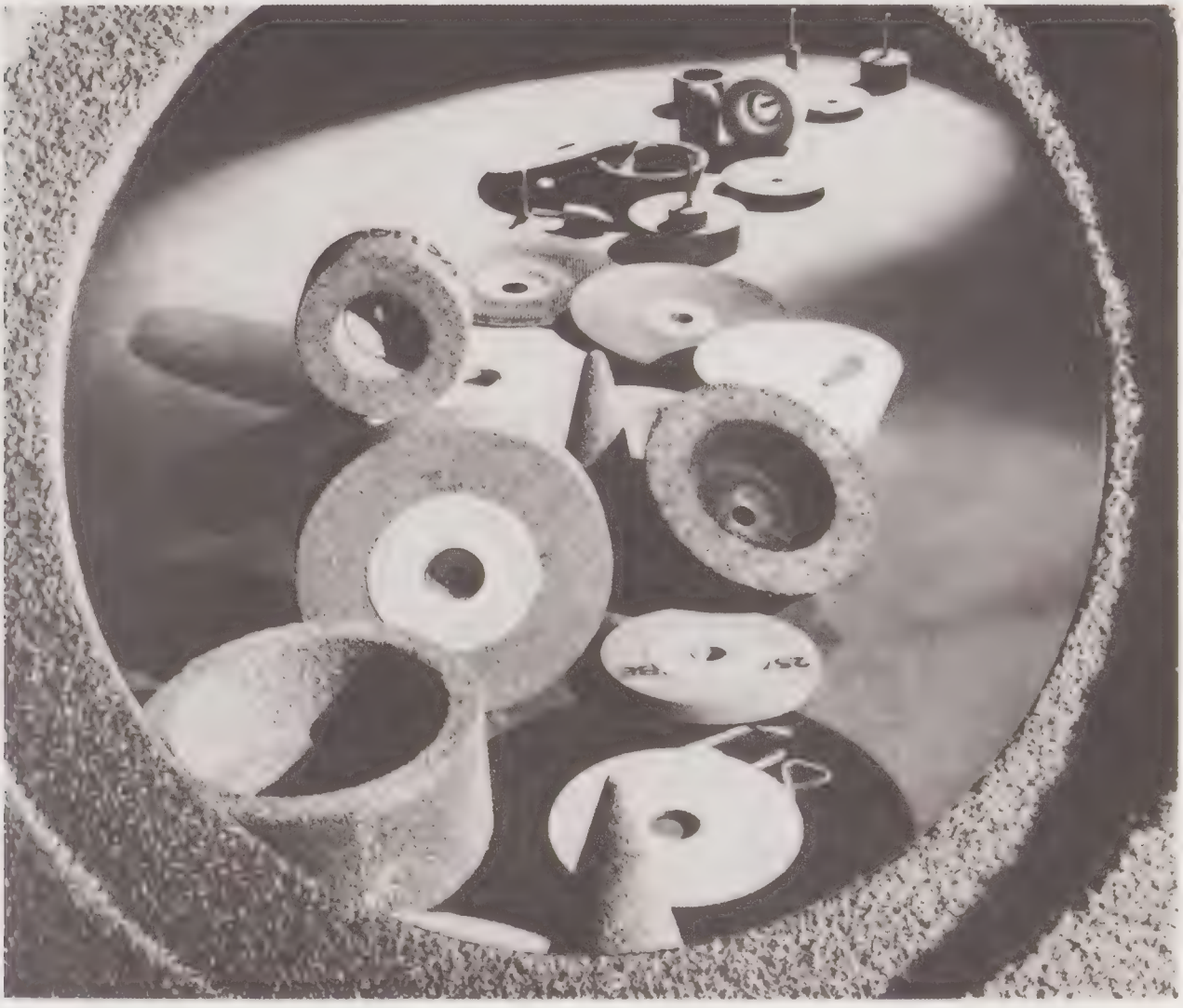


Bolt Diameter	1/4"	5/16"	3/8"	1/2"
Drill Size	1/2"	5/8"	5/8"	7/8"
Shield Length	1 1/2"	2 1/4"	2 1/4"	3"
Maximum Load lbs.	3600	6400	6200	9200
Quantity per box	50	25	25	25

HOBSON RAG OR ROCK BOLTS WHITWORTH THREAD

Finish Black or Galvanised. Supplied plain or complete with Nuts and Washers.
Larger sizes or special lengths can be supplied.

3/8" x 4"	6"	8"
1/2" x 8"	10"	12"
5/8" x 8"	10"	12"
3/4" x 8"	10"	12"
1" x 10"	12"	14"



ANALYSIS OF A TYPICAL A.A. GRINDING WHEEL MARKING

32A46-JVG

ABRASIVE

Aluminium Oxide –	A
19 Aluminium Oxide	19A
23 Aluminium Oxide	23A
25 Aluminium Oxide	25A
32 Aluminium Oxide	32A
38 Aluminium Oxide –	38A
57 Aluminium Oxide –	57A
37 Silicon Carbide	37C
39 Silicon Carbide	39C

GRAIN SIZE

Coarse	to	Very	Fine
10	30	80	220
12	36	90	240
14	46	100	280
16	54	120	320
20	60	150	400
24	70	180	500

GRADE

Soft to Very Hard

E	J	O	U
F	K	P	V
G	L	Q	W
H	M	R	X
I	N	S	Y
		T	Z

STRUCTURE NUMBERS: A.A. wheels are normally made by the Controlled Structure method to standard structure numbers. These are not shown except in the case of: (a) Induced Pore Products. (b) Non-standard Structure Products.

Non-standard Items are only manufactured after standard structures have been proved unsuitable for the operation.

"P" ADDED AT END (e.g., VBEP, BP, VKP) indicates INDUCED PORE TYPES.

TYPE OF BONDS

B Resinoid

Aluminium Oxide and Silicon Carbide Products

B = Regular Resinoid
B2 = "2" Type Resinoid
B5 = "5" Type Resinoid
B7 = "7" Type Resinoid
B11 = "11" Type Resinoid
B12 = "12" Type Resinoid
B14 = "14" Type Resinoid
B15 = "15" Type Resinoid

Resinoid Reinforced

BDA = Raised Hub
BSA = Dome Wheels
BRA = Straight Wheels
BNA = Cutting Off Wheels
BNA3 = Cutting Off Wheels

E = Shellac

Aluminium Oxide and Silicon Carbide Products

E6 = "6" Type Shellac

V = Vitrified

Aluminium Oxide Products

V = Regular Vitrified
VBE = "BE" Type Vitrified
VBEP = "BEP" Type Induced Pore Vitrified
VBEPL = "BEPL" Type Induced Pore Vitrified
VG = "G" Type Vitrified
VBA = "BA" Type Vitrified

Silicon Carbide Products

V = Regular Vitrified
VK = "K" Type Vitrified

Induced Pore Vitrified

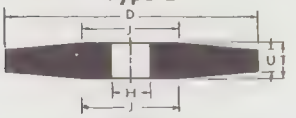
VKP = "KP" Type
VP = "P" Type

Wheels in RUBBER and SILICATE BONDS, not yet made in Australia, can be imported to special order.

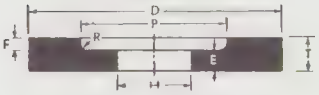
STANDARD WHEEL SHAPES

Type 1

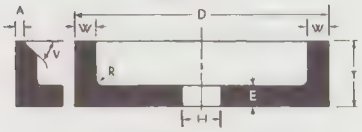
Type 2



Type 4

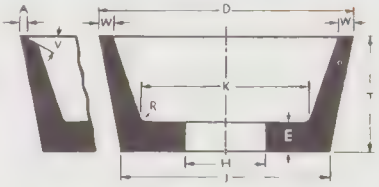


Type 5



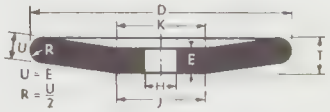
Type 6

Type 7

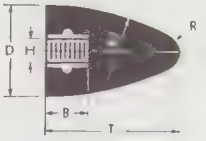


Type 11

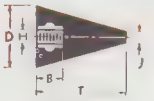
Type 12



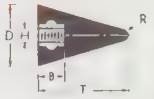
Type 13



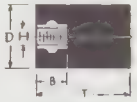
Type 16



Type 17



Type 17 R



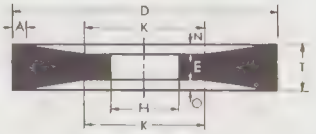
Type 18

Type 18 R

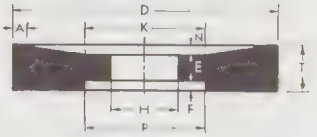
Type 19

Type 19 R

Type 20



Type 21

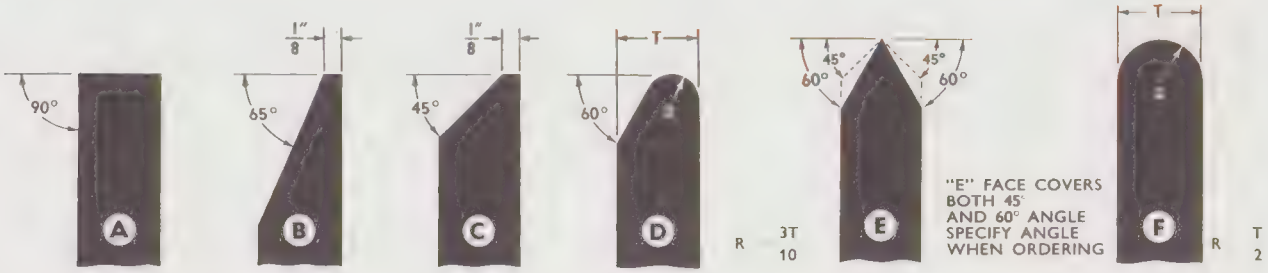


Type 22

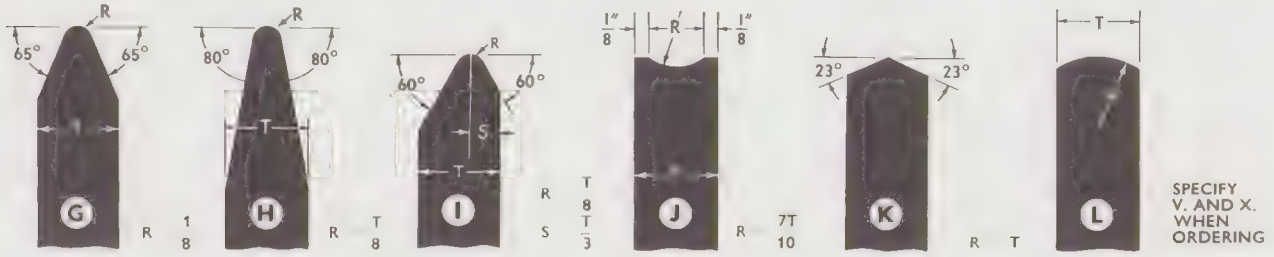
KEY TO LETTER DIMENSIONS

A	=	Flat spot of bevelled wall
D	=	Diameter (over all)
E	=	Thickness at hole
F	=	Depth of recess (see types 5 & 7)
G	=	Depth of recess (see type 7)
H	=	Hole
J	=	Diameter of outside flat
K	=	Diameter of inside flat
M	=	Large diameter of bevel
P	=	Diameter of recess
T	=	Thickness (over all)
U	=	Width of edge
V	=	Angle of bevel
W	=	Wall thickness at grinding face

STANDARD WHEEL FACES

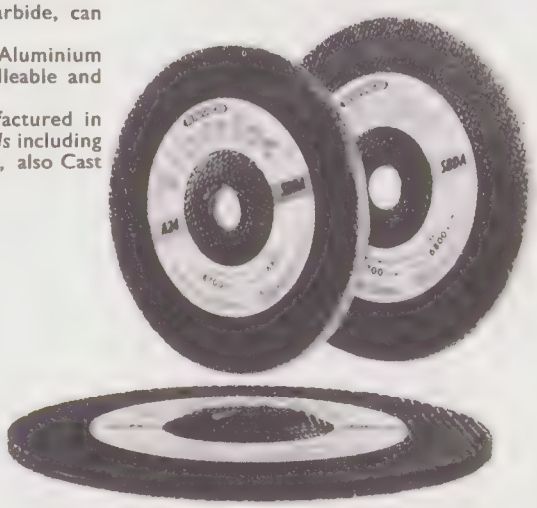


When no face is specified a straight "A" face wheel is furnished. The different faces which are regularly supplied are designated by letters as shown here:



FIBERLOC GOLD LABEL REINFORCED RAISED HUB WHEELS

Manufactured in two basic abrasive types, Aluminium Oxide and Silicon Carbide, can be easily identified by the wheels' surface colours.
BRIGHT RED: Wheels with a bright red coloured surface are manufactured in Aluminium Oxide Abrasive and are recommended for grinding ferrous metals . . . Malleable and Chilled Iron and a wide variety of steels.
BRIGHT GREEN: Wheels with a bright green coloured surface are manufactured in Silicon Carbide Abrasive and are recommended for grinding *non-ferrous metals* including Aluminium, Copper, Brass, Bronze; *non metallics* Stone, Brick, Concrete, also Cast Iron



SIZES AND SPECIFICATIONS

3 × $\frac{1}{2}$ × $\frac{7}{8}$″	4 × $\frac{1}{2}$ × $\frac{7}{8}$″	4$\frac{1}{2}$ × $\frac{3}{16}$ × $\frac{7}{8}$″
†7 × $\frac{1}{4}$ × $\frac{7}{8}$″	7 × $\frac{3}{8}$ × $\frac{7}{8}$″	7 × $\frac{1}{4}$ × 22 mm
7 × $\frac{3}{16}$ × $\frac{7}{8}$″	7 × $\frac{1}{8}$ × 22 mm	7 × $\frac{3}{8}$ × 22 mm
7 × $\frac{1}{4}$ × $\frac{7}{8}$″	7 × $\frac{3}{16}$ × 22 mm	
†9 × $\frac{1}{4}$ × $\frac{7}{8}$″	9 × $\frac{3}{8}$ × $\frac{7}{8}$″	9 × $\frac{1}{4}$ × 22 mm
9 × $\frac{3}{16}$ × $\frac{7}{8}$″	†9 × $\frac{1}{8}$ × 22 mm	9 × $\frac{3}{8}$ × 22 mm
9 × $\frac{1}{4}$ × $\frac{7}{8}$″	9 × $\frac{3}{16}$ × 22 mm	

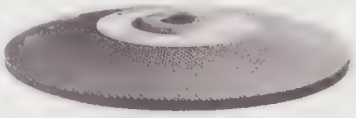
†Available in medium and hard grades only.

ABRASIVE TYPES	GRIT SIZES	GRADES
A, C, AC	24	Soft, Medium, Hard
	36	Soft, Medium, Hard
	60	Soft, Medium

A = Aluminium Oxide; C = Silicon Carbide; AC = Combination

OTHER SIZES AND SPECIFICATIONS AVAILABLE ON REQUEST

FIBERLOC DOME



SIZES AND SPECIFICATIONS

7 × $\frac{1}{4}$ × $\frac{7}{8}$″ 7 × $\frac{1}{4}$ × 22 mm	9 × $\frac{1}{4}$ × $\frac{7}{8}$″ 9 × $\frac{1}{4}$ × 22 mm

ABRASIVE TYPES	GRIT SIZES	GRADES
A, 37C	24	Q, S, U.
	36	Q, S, U.
	46	Q, S, U.

OTHER SPECIFICATIONS AVAILABLE ON REQUEST

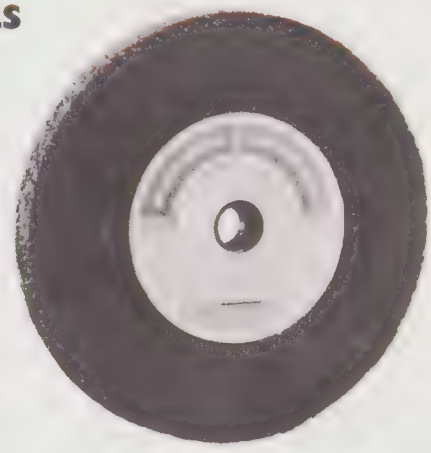
"Dome" was added to our range of Fiberloc reinforced wheels because of the advantages its distinctive "saucer" shape has in certain applications.
This shape allows more effective smoothing of contour welds; reduces warping of light metals caused by pressure and heat; can be applied at a much flatter angle, providing ease of control in vertical weld grinding, access into deep and restricted areas, more comfortable holding stance resulting in less operator fatigue and as it has a large area of contact, provides fast stock removal when cleaning or smoothing down concrete or sheet metal surfaces.

The colour coding RED and GREEN is used in Dome wheels as indicated for Raised Hub wheels

REINFORCED STRAIGHT GRINDING WHEELS

"FIBERLOC" STRAIGHT TYPE BRA

For use on Portable Machines



DIAMETER —
2″ 3″ 4″ 5″ 6″ 7″ 8″ 9″ 10″ 12″ 14″ 16″ 18″ 20″ 24″

THICKNESS —
All Wheels Available $\frac{3}{16}$″ $\frac{1}{4}$″ $\frac{5}{16}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{5}{8}$″ $\frac{3}{4}$″ $\frac{7}{8}$″ 1″ Thickness

HOLE SIZES — Available as ordered

"FIBERLOC" REINFORCED CUTTING-OFF WHEELS

Type BNA and BNA3 for use on Portable Saw Benches and Chopper Type Cutting Off Machines up to 16,000 S.F.P.M.

Aluminium Oxide Abrasive for Metals. Silicon Carbide Abrasives for Non Metals.

Dia. in Inches	Thicknesses in Inches	Available Hole Sizes in Inches
2	3/32 1/8 5/32	1/4 5/16 1/2 5/8 3/4 7/8
3	3/32 1/8 5/32	1/4 3/8 1/2 5/8 3/4 7/8 1
4	3/32 1/8 5/32	5/16 3/8 1/2 5/8 3/4 7/8 1"
5	3/32 1/8 5/32	5/16 1/2
6	3/32 1/8 5/32	1/2 5/8 3/4 7/8 1" 1 1/8 1 1/4
6 1/2	3/32	5/8
7	3/32 1/8 5/32	5/8 3/4 7/8 1 1/8 1 1/4
8	3/32 1/8 5/32	1/2 5/8 3/4 7/8 1" 1 1/8 1 1/4 1 3/8
9	3/32 1/8 5/32	5/8 3/4 7/8 1 1 1/8 1 1/4 1 3/8
10	3/32 1/8 5/32	5/8 3/4 7/8 1 1 1/4 1 3/8 3 1/8
12	3/32 1/8 5/32	7/8 1" 1 1/4 3 1/8
14	1/8 5/32 3/16	7/8 1" 1 1/4 1 3/4
16	1/8 5/32 3/16 *1/4	7/8 1" 1 1/4 1 1/2 3/4 40MM
18	*3/16 *1/4	1 3/4 to 6"
20	3/16 *1/4	1 3/4 to 6
24	*1/4	1 3/4 to 12"

*Available Type BNA3 only

"FIBERLOC" HIGH SPEED TYPE BNAH

for use in the Speed range over 16,000 S.F.P.M. to 20,000 S.F.P.M. on high speed Chopper Machine, Aluminium Oxide Abrasive only.

Diameter in Inches	Thickness in Inches	Available Hole Sizes in Inches
10	1/8	1"
12	1/8	1" 1 1/4"
14	5/16	1" 1 1/4"
16	5/32	1" 1 1/4" 40MM

"FIBERLOC" GREEN CONCRETE TYPE BNA

DIAMETER — 12" 14" 16" 18" 20" 24"

THICKNESSES

All wheels available 3/16" 1/4" 5/16" 3/8" thickness except 24" x 3/16".

HOLE SIZE — Available as ordered, please specify "Green Concrete".

TYPE W SEMI-REINFORCED

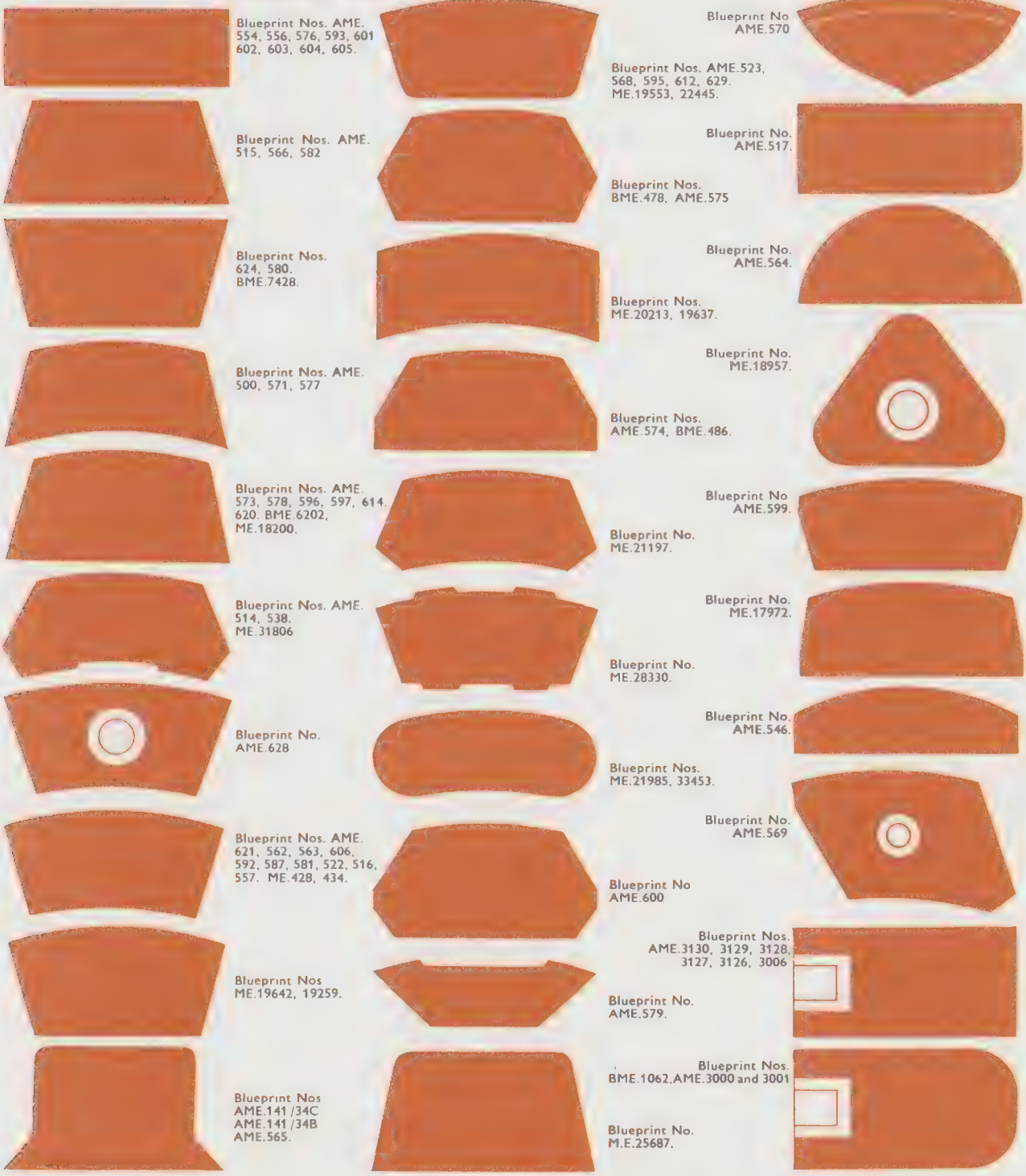
Dia. in Inches	Thickness in Inches	Available Hole Sizes in Inches
10	3/32 1/8	5/8 3/4 7/8 1 1 1/4 1 3/8 3 1/8
12	3/32 1/8	7/8 1 1 1/4 3 1/8
14	1/8 5/32 3/16	7/8 1 1 1/4 1 3/4
16	1/8 5/32 3/16	7/8 1 1 1/4 1 1/2 40MM

CUTTING-OFF WHEELS

NON REINFORCED

Dia. in Inches	Thickness in Inches	Available Hole Sizes in Inches
2	3/32	3/8
4	3/32	5/16 3/8 1/2 3/4 1
5	3/32	5/16 1/2
6	3/32	1/2 5/8 3/4 1 1 1/8 1 1/4
7	3/32	3/8 3/4 1 1/8 1 1/4
8	3/32	1/2 5/8 3/4 7/8 1 1 1/8 1 1/4 1 3/8
9	3/32	5/8 3/4 7/8 1" 1 3/8
10	3/32	5/8 3/4 7/8 1" 1 1/4 1 3/8 3 1/8
12	3/32	1 1 1/4 3 1/8
12	1/8	7/8 1 1 1/4 3 1/8
14	1/8	1 1 1/4 1 3/4
16	1/8	7/8 1 1 1/4 1 1/2 40MM

SHAPES OF SEGMENTS, FLOOR SURFACING BLOCKS, ROLL SCOURING BLOCKS, BLIND END WHEELS, etc



Blueprint Nos. AME. 554, 556, 576, 593, 601 602, 603, 604, 605.

Blueprint Nos. AME. 515, 566, 582

Blueprint Nos. 624, 580. BME.7428.

Blueprint Nos. AME. 500, 571, 577

Blueprint Nos. AME. 573, 578, 596, 597, 614. 620. BME.6202, ME.18200.

Blueprint Nos. AME. 514, 538. ME.31806

Blueprint No. AME.628

Blueprint Nos. AME. 621, 562, 563, 606, 592, 587, 581, 522, 516, 557. ME.428, 434.

Blueprint Nos ME.19642, 19259.

Blueprint Nos AME.141 /34C AME.141 /34B AME.565.

Blueprint No ME.15496

Blueprint No AME.570

Blueprint Nos. AME.523, 568, 595, 612, 629. ME.19553, 22445.

Blueprint No. AME.517.

Blueprint Nos. BME.478, AME.575

Blueprint No. AME.564.

Blueprint Nos. ME.20213, 19637.

Blueprint No. ME.18957.

Blueprint Nos. AME.574, BME.486.

Blueprint No AME.599.

Blueprint No. ME.21197.

Blueprint No. ME.17972.

Blueprint No. ME.28330.

Blueprint No. AME.546.

Blueprint Nos. ME.21985, 33453.

Blueprint No. AME.569

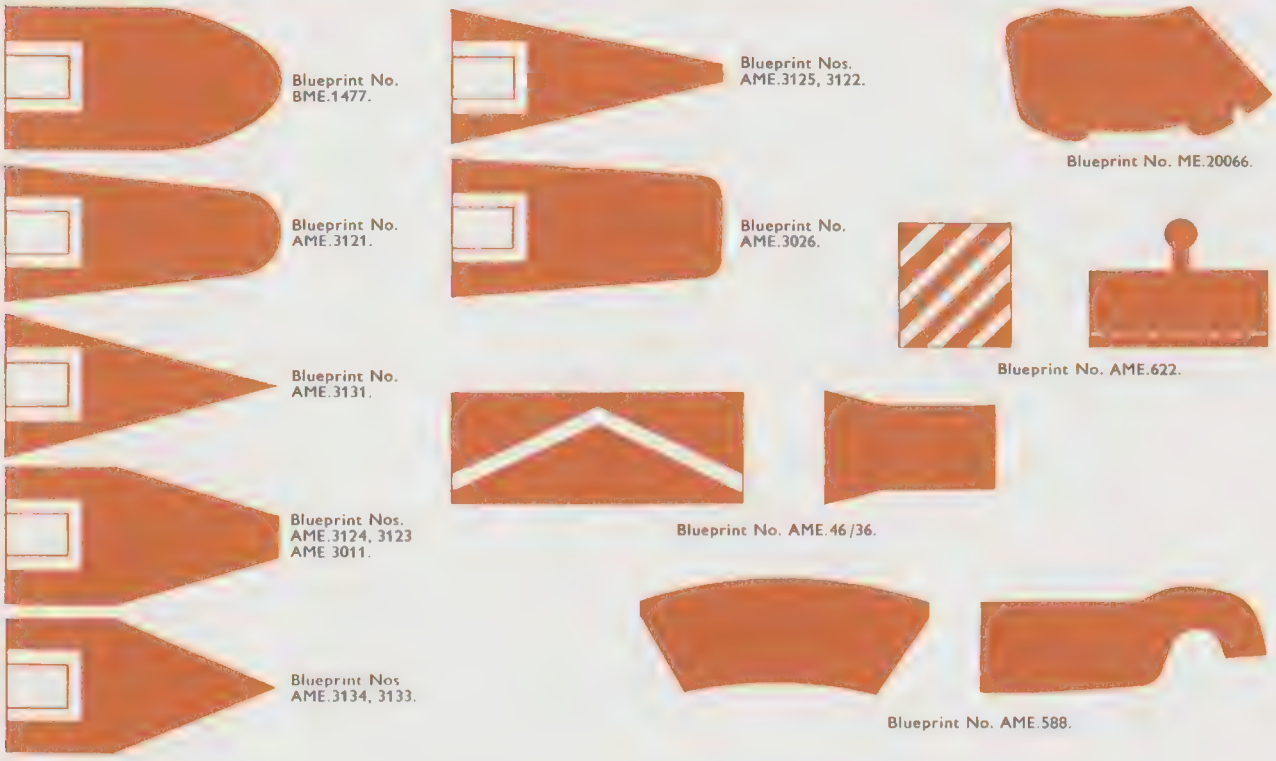
Blueprint No AME.600

Blueprint Nos. AME.3130, 3129, 3128, 3127, 3126, 3006

Blueprint No. AME.579.

Blueprint Nos. BME.1062, AME.3000 and 3001

Blueprint No. M.E.25687.



VITRIFIED AND RESINOID BOND (DIMENSIONS IN INCHES)

Machine Make	Blueprint Number	Width		Thickness	Length	Segments per Set
		Max.	Min.			
Billeter	AME.554	$3\frac{3}{16}$	—	$\frac{3}{4}$	6	—
	AME.556	$3\frac{3}{16}$	—	1	6	—
Berko	AME.578	65mm.	57mm.	25mm.	100mm.	10
Blanchard	ME.33453	$5\frac{23}{32}$	—	2" Radial	6	6–8
	ME.21985	7.063	—	1.75" Radial	6	6
	ME.19637	6	—	2" Radial	7	—
Bridgeport	AME.569	$6\frac{5}{8}$	—	3" Radial	8	12
Carborundum	ME.20213	$4\frac{1}{2}$	—	$1\frac{1}{2}$" Radial	6	—
Churchill	ME.18200	$4\frac{1}{16}$	$3\frac{11}{32}$	$1\frac{1}{2}$	6	8 10 12
	AME.614	$4\frac{1}{16}$	$3\frac{11}{32}$	$1\frac{1}{2}$	7	—
	ME.17972	7	$6\frac{13}{16}$	2	6	12–16–20
Cortland	AME.546	$3\frac{1}{2}$	—	$\frac{7}{8}$	4	4
Diskus	AME.516	62mm.	50mm.	32mm. Radial	30mm.	16
	AME.522	110mm.	99mm.	32mm. Radial	55mm.	18
	AME.628	62mm.	50mm.	32mm. Radial	40mm.	—
Eichener	AME.581	124mm.	89.5mm.	45mm. Radial	200mm.	8
Goekel	AME.592	95mm.	72mm.	25mm. Radial	120mm.	10
Grimonoprez	AME.627	$3\frac{3}{4}$	—	$2\frac{1}{8}$	$6\frac{1}{2}$	—

VITRIFIED AND RESINOID BOND (DIMENSIONS IN INCHES)

Machine Make	Blueprint Number	Width		Thickness	Length	Segments per Set
		Max.	Min.			
Hanchett	AME.514	4⅝ (McLean)	—	1½" Radial	6	6
	AME.538	5⅛	—	1½" Radial	6	6
	ME.20066	5 5/16	—	1 15/16" Radial	7	—
	ME.31806	6 3/16	—	2" Radial	6	6
	ME.41953	5 19/32	—	1¼" Radial	5	8
Hancock	AME.606	10⅝	9 19/32	2	6	12
Harle	AME.500	3⅜	3	1⅛" Radial	6	12
Hill	ME.28330	7⅜	6.446	1 15/16"	7¼	9
Luke and Spencer ..	AME.565	10¾	7¾	4⅛/4 9/16 Radial	3⅞	8
	AME.573	3	2½	1¼	5	8
Lumsden	ME.19553	4⅝	3⅛	1¾	6	6-8-10-12-14
	ME.22445	6½	4½	2¼	9	16-18
Matra	AME.624	65mm.	48mm.	20mm.	100mm.	—
Naxos	AME.576	120mm.		40mm.	180mm.	12
Podasky	AME.602	3		1	7	—
Rogers	ME.21197	4⅛	3 51/64	1¼" Radial	4½	8
Schneider	AME.577	67mm.	55.7mm.	30mm. Radial	150mm.	
	AME.601	108mm.	—	40mm.	160mm.	—
	AME.603	3⅛	—	1 5/16	6	8
	AME.605	3	—	1	6	—
Schonherr	AME.557	75mm.	44mm.	19mm. Radial	4½	—
Schou	AME.597	90mm.	76mm.	30mm.	127mm.	8
Seybold	ME.19642	4 7/32	3⅜	1¾	10	16
Snow	BME.478	4⅝	3½	1¾	6	6 10
	BME.486	4⅝	3½	1¾	6	6
	ME.19259	6	3 5/16	3	9	6
	AME.523	8¾	6⅛	3	12	6
	AME.574	4⅝	3½	1¾	8	6
	AME.575	4⅝	3½	1¾	8	6
	AME.629	8¾		3	6	—
T.O.S.	AME.604	3⅛		1	6	—
Miscellaneous	BME.6202	2¾	2 7/32	1⅛	4⅜	
	BME.7428	55mm.	50mm.	15mm.	90mm.	
	AME.515	1¾	1½	⅜	4	16
	AME.517	2	—	¾	3½	
	AME.564	3⅜	—	1⅜	1	
	AME.566	1¼	1	¾	2	
	AME.568	4 7/32	3⅜	1 3/16	10	
	AME.571	1 3/16	1⅝	¾ Radial	3¾	—
	AME.633	120mm.	—	30mm.	180mm.	
	AME.579	2 61/64	1 33/64	⅞	4½	
	AME.580	3	2 29/32	1⅝	8	—
	AME.587	5⅜	3⅞	1 5/32" Radial	6¼	
	AME.593	2		2	8	—
	AME.595	4⅝	3⅛	1¾	8	—
	AME.599	4 7/32	3⅜	2¼	10	
	AME.600	4⅝	3½	2	8	
	AME.612	4⅝	3⅛	1¾	7½	—
	AME.620	65mm.	57mm.	25mm.	6	12
	AME.621	75mm.	46mm.	25mm.	112mm.	—
	AME.636	53.5mm.		16mm.	100mm.	
	AME.637	8¾	6¾	6	12	—

MOUNTED POINTS & WHEELS

STANDARD ABRASIVES FOR ALL SHAPES.

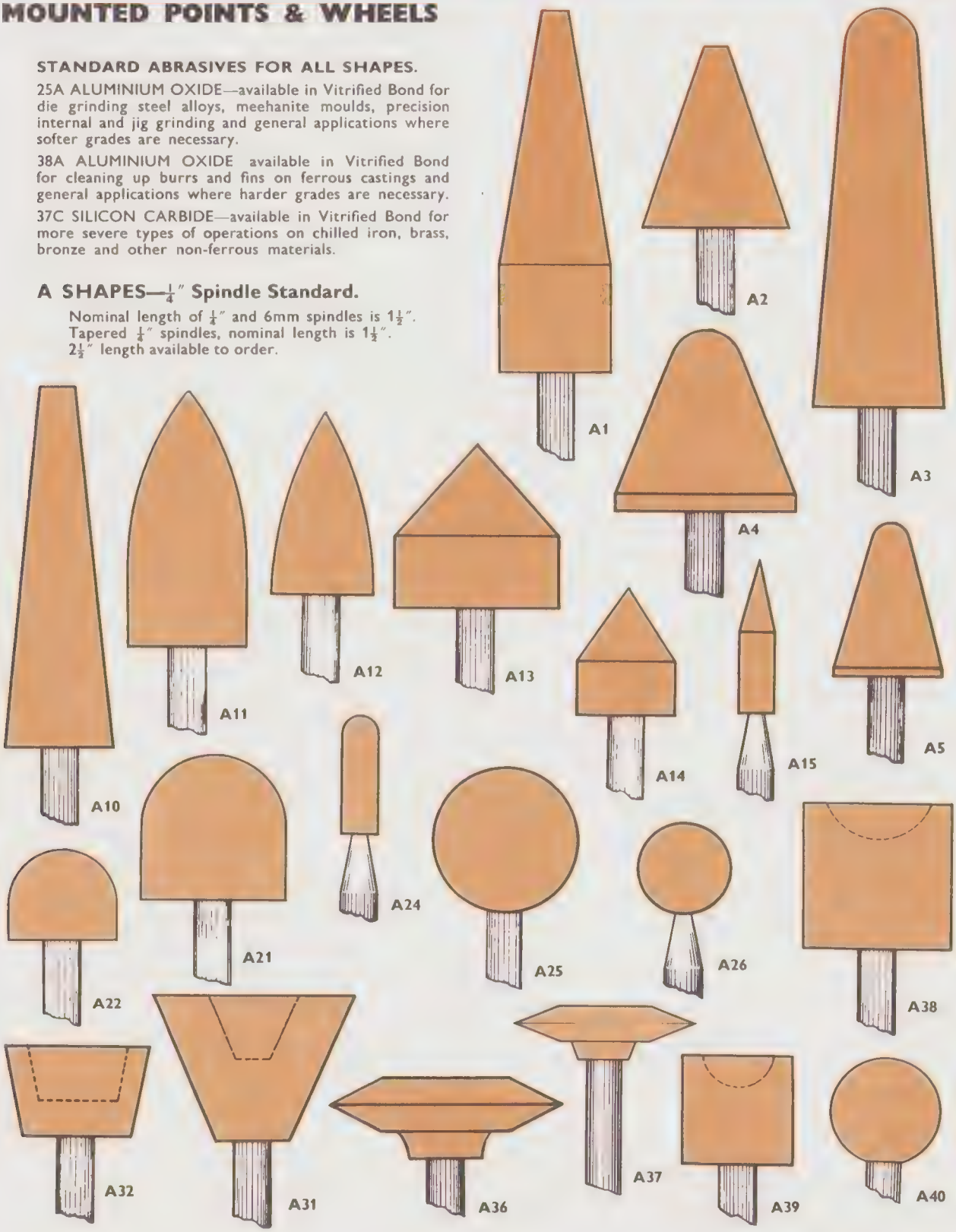
25A ALUMINIUM OXIDE—available in Vitrified Bond for die grinding steel alloys, meehanite moulds, precision internal and jig grinding and general applications where softer grades are necessary.

38A ALUMINIUM OXIDE available in Vitrified Bond for cleaning up burrs and fins on ferrous castings and general applications where harder grades are necessary.

37C SILICON CARBIDE—available in Vitrified Bond for more severe types of operations on chilled iron, brass, bronze and other non-ferrous materials.

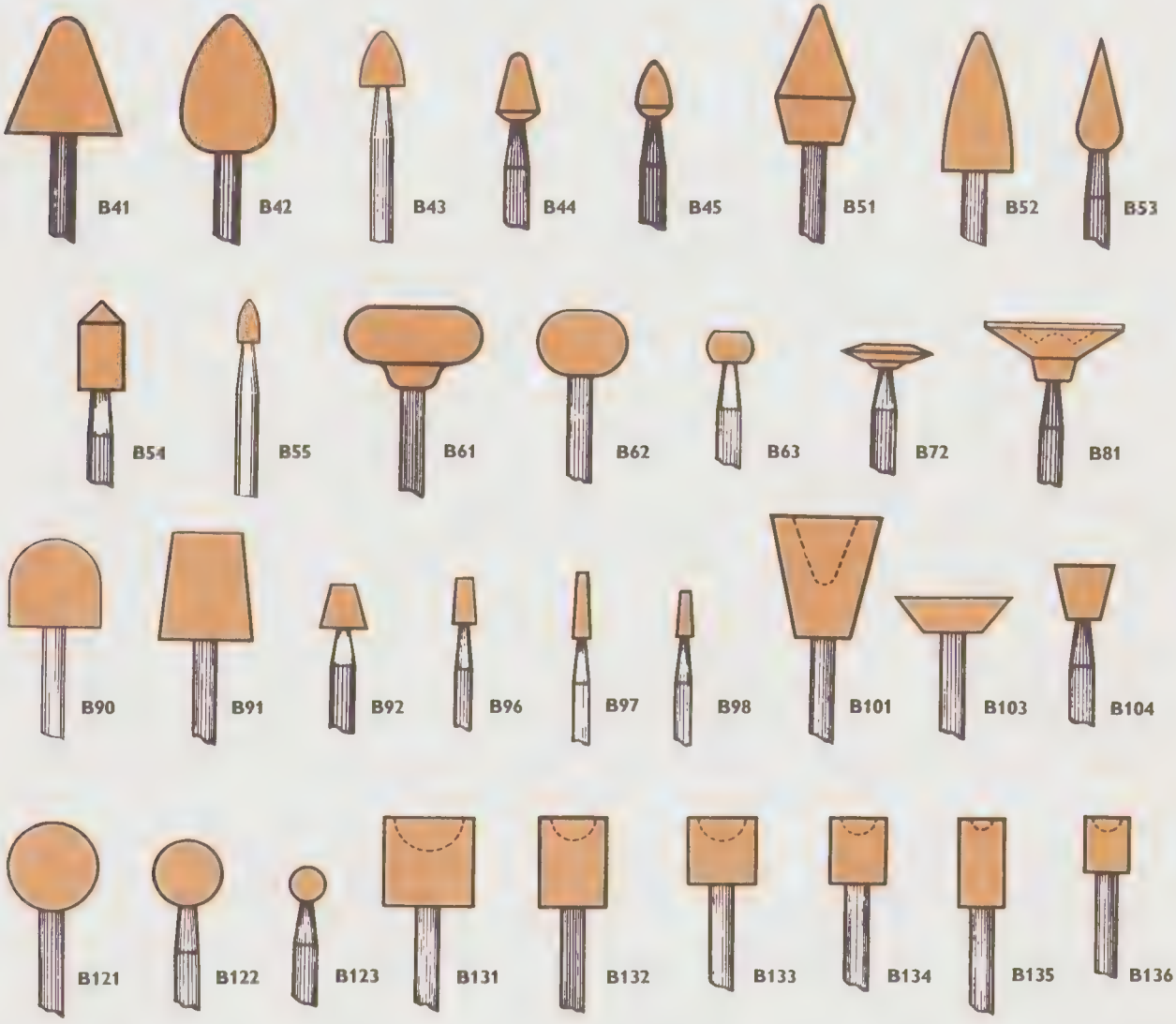
A SHAPES—¼" Spindle Standard.

Nominal length of ¼" and 6mm spindles is 1½".
Tapered ¼" spindles, nominal length is 1¼".
2½" length available to order.



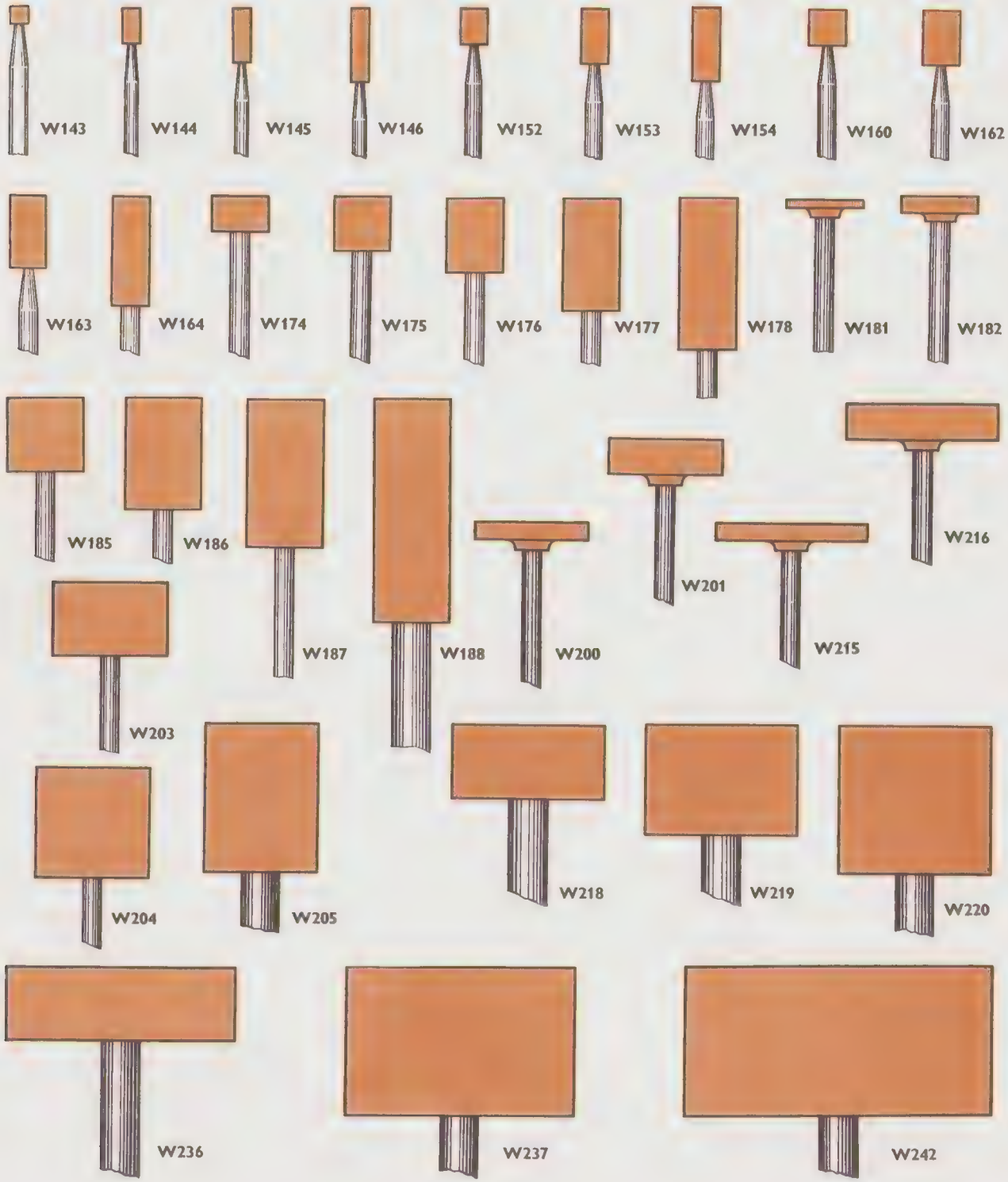
B SHAPES—$\frac{1}{8}$″ Spindle Standard.

Nominal length of $\frac{3}{32}$″, $\frac{1}{8}$″, 6mm spindles is $1\frac{1}{2}$″.
Tapered $\frac{1}{4}$″ spindles, nominal length is $1\frac{1}{2}$″.
$2\frac{1}{2}$″ length available to order.



W SHAPES—$\frac{1}{8}$″ Spindle Standard.

Nominal length of $\frac{3}{32}$″, $\frac{1}{8}$″, 6mm and straight $\frac{1}{4}$″ spindles is $1\frac{1}{2}$″.
Tapered $\frac{1}{4}$″ spindles, nominal length is $1\frac{1}{2}$″.
$2\frac{1}{2}$″ length available to order.

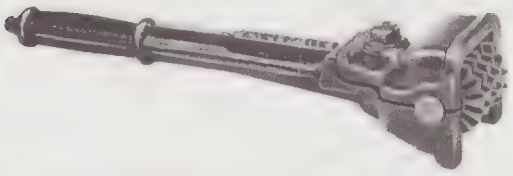


WHEEL DRESSERS

BAMFORD STAR-TYPE WHEEL DRESSER

Used to dress and true wheels of medium-hard grades used for general-purpose grinding on small floor stand and bench grinders.

No. 0, No. 1, No. 2, No. 3, No. 5.



CORRUGATED-TYPE WHEEL DRESSER

Similar in application to the starwheel-type dresser. No. 5 only.

SIEVERT-TYPE WHEEL DRESSER

For precision dressing of grinding wheels where an extremely accurate finish is required.

BAMFORD ABRASIVE WHEEL DRESSER

For dressing, truing and forming of grinding wheels used for tool sharpening.

BAMFORD ABRASIVE BELT DRESSER

For use on coarse to medium grades of abrasive belts and discs.

REPLACEMENT PARTS AVAILABLE

Star Wheels for No. 0, No. 1, No. 2, No. 3, Dresser.
Pins and Bushes for No. 0, No. 1, No. 2, No. 3, Dresser.
Corrugated Type Wheels No. 5.
Abrasive Wheel Dresser Assembly.
Abrasive Belt Dresser Assembly.

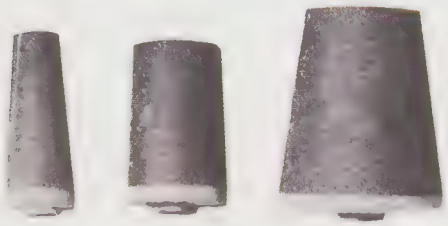
VALVE GRINDING PASTE

Fine, Medium, Coarse.
Water Mix: 2oz., 4oz., 16oz. tins.
Grease Mix: 2oz., 16oz. tins.

LAPPING COMPOUND

Fine 700, Medium 500, Coarse 240.
16oz. tins.

FELT CONE MANDRELS



Model	509	499	502	503	505	510	521
Length Overall	3⅛″	2¼″	5″	5″	2¼″	2½″	2½″
Included Angle	4°	2¾°	3°	2¾°	7¾°	2½°	4¾°

EXPANDING WHEELS

Wheel Sizes: 3″ x 1″ to 8″ x 2″. ⅝″ bore.

CONTACT WHEELS

4″ x 2″, 4″ x 4″, 6″ x 2″, 8″ x 2″, 8″ x 4″, 10″ x 2″, 12″ x 2″.

DIAMOND WHEELS AND HONES

DIAMOND CARBIDE GRINDING WHEELS

OFFHAND GRINDING

M19 Diamond Wheels for Offhand Grinding of Carbide Tools, Glass Lenses, Ceramics and Semi Precious Stones.

FIXED FEED GRINDING

"ARMORED" diamond wheel in B56 bond for Wet or Dry Grinding.

DIAMOND CUTTING OFF WHEELS

Standard Industrial Continuous Rim Diamond Cutting Off Wheels for cutting Glass, Tungsten Carbide, Ceramic Tiles and "GEMKING" specification for Lapidary applications.

Diamond Pencil Edging and Arrissing Wheels

PENCIL EDGING WHEELS

Diameter $9\frac{3}{4}''$
Thickness $\frac{5}{8}''$
Hole $8''$
Diamond Depth $\frac{1}{8}''$
Concentrations 50, 75, 100

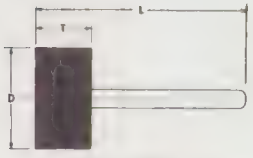
Glass Thickness	Blueprint No.
$\frac{1}{8}''$	AME1626
$\frac{5}{32}''$	AME1615
$\frac{3}{16}''$	AME1616
$\frac{7}{32}''$	AME1617
$\frac{1}{4}''$	AME1618

ARRISSING WHEELS

Diameter $10''$
Thickness $\frac{5}{8}''$
Hole $8''$
Diamond Depth $\frac{1}{16}''$
Concentrations 50, 75, 100

Glass Thickness	Blueprint No.
$\frac{1}{8}''$	
$\frac{5}{32}''$	
$\frac{3}{16}''$	
$\frac{7}{32}''$	AME1571
$\frac{1}{4}''$	

STANDARD SHAPES OF A.A. DIAMOND WHEELS



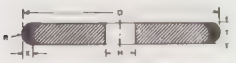
Type DWS
Resinoid, Metal, Vitrified Bonds

Type DIAI
Resinoid, Metal, Vitrified Bonds

Type DIAIR
Resinoid, Metal Bonds

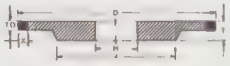
Type DIEEI
Resinoid Bond

Type DIE9
Resinoid Bond

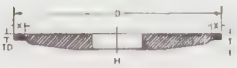


Type DIFFI
Resinoid Bond

Type D3AI Special
Resinoid Bond



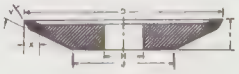
Type D3AI
Resinoid, Metal Bonds



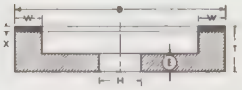
Type D3A9
Resinoid Bond

Type D3E9
Resinoid Bond

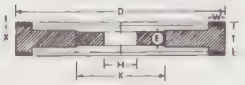
Type D3FI
Resinoid Bond



Type D4BI
Resinoid, Metal, Vitrified Bonds

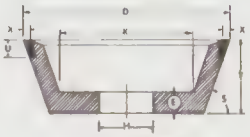


Type D6A2
Resinoid, Metal, Vitrified Bonds

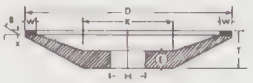


Type D9A3
Resinoid, Metal Bonds

Type DIIA2
Resinoid, Metal, Vitrified Bonds



Type DIIV9
Resinoid Bond



Type DI2A2
Resinoid Bond

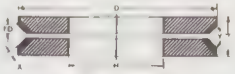
Type DI4AI
Resinoid, Metal Bond

Type DHI
Vitrified Bond

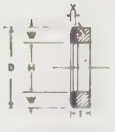
Type DH2
Vitrified Bond

Type DIAIS *
Metal Bond

Type DIFF6Y*
Metal Bond

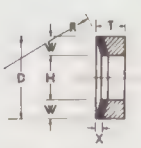


Type DIEE6Y*
Metal Bond



Type D2FF2 *
Metal Bond

Type D2FV2 *
Metal Bond



Type D2P4V *
Metal Bond

Type D2P5 *
Metal Bond

DIAMOND SEGMENTAL SAWS

FOR FAST ECONOMICAL CUTTING OF: GRANITE, MARBLE, SANDSTONE, SLATE, TERRAZZO, BRICKS, CONCRETE OR REFRACTORIES.

AVAILABLE GULLET SHAPES

NARROW GULLETS
for general cutting and or where the arris is important as in marble cutting

WIDE GULLETS
where the arris finish is not critical, when cutting highly abrasive materials such as Sandstone, Concrete, Masonry, where assistance in sludge clearance is necessary and where gullet protection is required

AVAILABLE SIZES
NARROW GULLET
(DIMENSIONS IN INCHES)

Saw Diameter	Saw Thickness	Depth of Diamond Section	No. of Segment
8	.093	1/8	12
10	.093	1/8	15
12	.093	1/8	18
12	.125	3/16	18
14	.093	1/8	20
14	.125	3/16	20
16	.125	3/16	24
18	.125	3/16	26
18	.145	3/16	26
20	.145	1/4	28
24	.185	1/4	32
26	.185	1/4	34
30	.210	1/4	36
32	.210	1/4	36
32	.250	1/4	36

AVAILABLE SIZES
WIDE GULLET
(DIMENSIONS IN INCHES)

Saw Diameter	Saw Thickness	Depth of Diamond Section	No. of Segment
12	.125	3/16	16
14	.125	3/16	18
16	.125	3/16	20
18	.125	3/16	22
20	.145	1/4	24
24	.185	1/4	28
26	.185	1/4	30
30	.210	1/4	30
32	.210	1/4	32
34	.250	1/4	34
36	.250	1/4	36
42	.250	1/4	42
44	250	1/4	44
48	250	1/4	48
54	281	1/4	54
60	.312	1/4	60
72	.343	1/4	72

Concentrations 20, 25, 30, 35, 40, 45, 50.

SHARPENING PRODUCTS
COMBINATION BENCH STONES

SILICON CARBIDE

For rapid sharpening chisels, plane irons and woodworking tools.

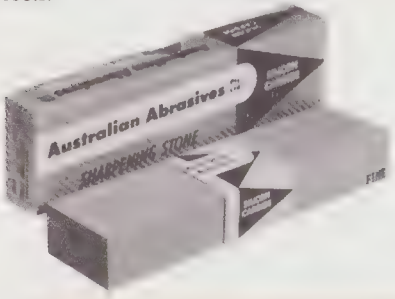
ALUMINIUM OXIDE

For giving a dull tool that fine and lasting edge

Catalogue No.	Length Inches	Width Inches	Thickness Inches
KS100	9	3	$1\frac{3}{16}$
108	8	2	1
109	6	2	1
110	7	2	1
111	5	2	$\frac{3}{4}$
112	4	$1\frac{3}{4}$	$\frac{5}{8}$
107	4 diam.		1
IB.8	8	2	1
IB.7	7	2	1
IB.6	6	2	1
*IB.45	5	2	$\frac{3}{4}$
*IB.134	4	$1\frac{3}{4}$	$\frac{5}{8}$
*IB.64	4	1 Round	

BENCH STONES
(Silicon Carbide)

Manufactured in one grit size, either Fine, Medium, Coarse—Suitable for rapid sharpening of all edged tools.



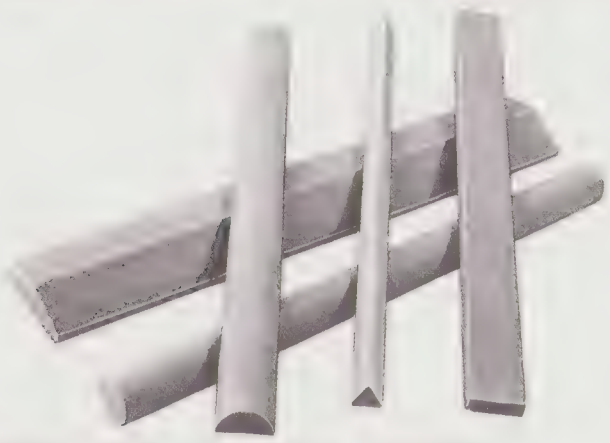
Cat. No.	Length Inches	Width Inches	Thick-ness Inches	Grit	Cat. No.	Length Inches	Width Inches	Thick-ness Inches	Grit
115	8	2	1	Fine	133	7	2	1	Fine
116	8	2	1	Medium	134	7	2	1	Medium
117	8	2	1	Coarse	*135	7	2	1	Coarse
*118	8	2	$\frac{3}{4}$	Fine	*136	5	2	$\frac{5}{8}$	Fine
*119	8	2	$\frac{3}{4}$	Medium	*137	5	2	$\frac{5}{8}$	Medium
121	6	2	1	Fine	142	4	$1\frac{3}{4}$	$\frac{1}{2}$	Fine
122	6	2	1	Medium	143	4	$1\frac{3}{4}$	$\frac{1}{2}$	Medium
123	6	2	1	Coarse	*144	4	$1\frac{3}{4}$	$\frac{1}{2}$	Coarse
*124	6	2	$\frac{5}{8}$	Fine	*145	4	1	$\frac{1}{4}$	Fine
*125	6	2	$\frac{5}{8}$	Medium	*146	4	1	$\frac{1}{4}$	Medium
*130	6	$1\frac{1}{2}$	$\frac{1}{2}$	Fine	*147	4	1	$\frac{1}{4}$	Coarse
*131	6	$1\frac{1}{2}$	$\frac{1}{2}$	Medium					

BENCH STONES
(Aluminium Oxide)

Qualities of hardness, sharpness and toughness make these stones of outstanding value in machine shops, for use on lathe and planer tools and scraper blades.—They also produce fine finishes on wood-working tools.

Cat. No.	Length Inches	Width Inches	Thick-ness Inches	Grit	Cat. No.	Length Inches	Width Inches	Thick-ness Inches	Grit
FB.8				Fine	*FB.26				Fine
MB.8	8	2	1	Medium	*MB.26	6	$1\frac{1}{2}$	$\frac{1}{2}$	Medium
CB.8				Coarse	*FB.35				Fine
*FB.48	8	2	$\frac{3}{4}$	Fine	*MB.35	5	2	$\frac{5}{8}$	Medium
*MB.48				Medium	*FB.124				Fine
FB.7	7	2	1	Fine	*MB.	4	$1\frac{3}{4}$	$\frac{1}{2}$	Medium
MB.7				Medium	*FB.24				Fine
CB.7				Coarse	*MB.24	4	1	$\frac{1}{2}$	Medium
FB.6				Fine	*CB.24				Coarse
MB.6	6	2	1	Medium	*FB.14				Fine
CB.6				Coarse	*MB.14	4	1	$\frac{1}{4}$	Medium
*FB.36	6	2	$\frac{5}{8}$	Fine	*CB.14				Coarse
*MB.36				Medium					

(*Made to special order only.)



FINISHED HONING STICKS

UNMOUNTED — Vitrified and Resin Bond

Section Inches	1/4	1/2	3/4	1	1 1/4	1 1/2		
Lengths Available inches	1	2	3	4	5	6	7	8

UNMOUNTED SPECIAL SHAPES

Blueprint No.	Dimensions Inches	Blueprint No.	Dimensions Inches
AME518	5/16 x 5/16 x 4	AME550	5/16 x 5/16 x 2 1/2
AME519	1/8 x 3/16 x 3 1/4	AME551	1/4 x 5/16 x 1 7/8
AME520	3/16 x 1/4 x 3 1/4	AME552	15/64 x 1/4 x 1 1/2
AME521	3/16 x 1/4 x 2 1/2	AME553	5/32 x 3/16 x 7/8
AME524	23/64 x 13/32 x 4	AME555	3/16 x 1/2 x 7/8
AME535	5/16 x 11/32 x 4	AME558	3/4 x 1 x 5
AME549	3/8 x 7/16 x 6	BME32	3/8 x 7/16 x 4

ROLL SCOURING BLOCKS

Vitrified Bond

Blueprint No.	Dimensions Inches	Blueprint No.	Dimensions Inches
AME141/34B	1/4/2 x 2 1/2 x 5 1/2	ME25687	1 7/8/2 3/8 x 1 13/16 x 5 1/2
AME141/34C	1 3/4/2 x 2 1/2 x 5 1/2	AME582	2 9/16 x 2 x 5 5/8
AME46/36	1 3/4/2 x 2 1/2 x 5 1/2		

FLOOR SURFACING BLOCKS

Vitrified Bond

Blueprint No.	Dimensions in Inches		
	Width	Thickness	Length
AME622	1 1/2	3 1/2	7
AME596	2 7/16/2 15/16	3 9/16	2
ME18957	2 5/16 (Triangular)	(3/4 Hole)	2
ME428	4 25/32/2 1/32	2 7/16	3
AME562	4 25/32/2 1/32	2 7/16	2
AME570	5 1/8	2 9/16	2
ME15496	5 5/8	2 15/16	2
ME434	6 11/16/3 13/16	2 29/32	3
AME563	6 11/16/3 13/16	2 29/32	2
AME619	6/4 1/2 (Circular)	2	No hole

UNFINISHED LENS BLOCKS

Vitrified Bond

Blueprint No.	Dimensions in Inches
AME540	1/2 x 1 15/16 x 1 15/16
AME539	1/2 x 2 x 2
AME591	1 5/8 x 1 1/8 x 7 13/16

RUBBING BRICKS

UNFINISHED Vitrified Resinoid Bond

Section Inches	Lengths Available Inches					
1/2 x 2	2	4	6			
1 x 1 1/2	2	4	6	8		10
1 x 2	2	4	6	8		10
1 x 2 1/2		4	6	8		10
1 x 3		4	6	8		10
1 x 4		4	6	8		10
1 x 4 1/2					9	
1 1/2 x 1 1/2	2	4	6	8		10
1 1/2 x 2	2	4	6	8		10
1 1/2 x 2 1/2		4	6	8		10
1 1/2 x 3		4	6	8		10
1 1/2 x 4		4	6	8		10
1 1/2 x 4 1/2					9	
2 x 2	2	4	6	8		10
2 x 2 1/2		4	6	8		10
2 x 3		4	6	8		10
2 x 4		4	6	8		10
2 x 4 1/2					9	
2 1/2 x 2 1/2		4	6	8		10
2 1/2 x 3		4	6	8		10
2 1/2 x 4		4	6	8		10
2 1/2 x 4 1/2					9	
3 x 3		4	6	8		10
3 x 4		4	6	8		10
3 x 4 1/2					9	
4 x 4		4	6	8		10
4 x 4 1/2					9	

SPECIAL UNFINISHED Vitrified Bond

Blueprint No. AME 588

FINISHED Vitrified and Resinoid Bond

Dimensions in Inches

1/4 x 2 x 3 1/2	1 x 3 x 4	2 x 3 x 6
1 x 2 x 2 3/4	1 x 4 x 4	2 x 3 x 8
1 x 3 x 3	3/4 x 1 1/2 x 6	1 x 4 x 8
1 x 2 x 4	1 x 3 x 6	1 1/4 x 4 3/4 x 10

FINISHED STICKS

Plain Vitrified Bond, Square Section,
Resinoid also Square, Triangular, Half Round, Round

Section Inches	1/8	3/16	1/4	3/8	1/2	5/8	3/4	1
Lengths Available Inches	4	4	4	4	4	4	4	4
	—	6	6	6	6	6	6	6
	—	—	8	8	8	8	8	8

FINISHED STICKS — SPECIAL

Print Nos. AME 537, AME 545, AME 609, AME 3021, AME 3024

UNFINISHED STICKS

Plain Vitrified Bond
Square, Triangular, Half Round, Round

Section Inches	1/4	3/8	1/2	5/8	3/4	1
Lengths Available Ins.	4	6	8			

UNFINISHED STICKS — SPECIAL

Blueprint No. AME 585

FILES, STICKS AND POINTS

SILICON CARBIDE

ROUND POINTS

Cat. No.	Length	Grit
97	3″ long	Fine
98	3″ long	Medium
99	3″ long	Coarse

ROUND STICKS

Length Inches		Thickness Inches	Grit
4	x	1	Fine / Medium / Coarse
4	x	3/4	
4	x	5/8	
4	x	1/2	
4	x	3/8	
4	x	5/16	
4	x	1/4	
6	x	1	
6	x	3/4	
6	x	5/8	
6	x	1/2	
6	x	3/8	
6	x	5/16	
6	x	1/4	

HALF-ROUND STICKS

Length Inches		Thickness Inches	Grit
4	x	1	Fine / Medium / Coarse
4	x	3/4	
4	x	5/8	
4	x	1/2	
4	x	3/8	
4	x	5/16	
4	x	1/4	
6	x	1	
6	x	3/4	
6	x	5/8	
6	x	1/2	
6	x	3/8	
6	x	5/16	
6	x	1/4	

TRIANGULAR STICKS

Length Inches		Thickness Inches	Grit
4	x	1	Fine / Medium / Coarse
4	x	3/4	
4	x	5/8	
4	x	1/2	
4	x	3/8	
4	x	5/16	
4	x	1/4	
6	x	1	
6	x	3/4	
6	x	5/8	
6	x	1/2	
6	x	3/8	
6	x	5/16	
6	x	1/4	

SQUARE STICKS

Length Inches		Thickness Inches	Grit
4	x	1	Fine / Medium / Coarse
4	x	3/4	
4	x	5/8	
4	x	1/2	
4	x	3/8	
4	x	5/16	
4	x	1/4	
6	x	1	
6	x	3/4	
6	x	5/8	
6	x	1/2	
6	x	3/8	
6	x	5/16	
6	x	1/4	

ALUMINIUM OXIDE

ROUND FILES

	Cat. No.		Size in Inches
FF.276	MF.276	CF.276	6 x 1
FF.266	MF.266	CF.266	6 x 3/4
FF.256	MF.256	CF.256	6 x 5/8
FF.246	MF.246	CF.246	6 x 1/2
FF.236	MF.236	CF.236	6 x 3/8
FF.244	MF.244	CF.244	4 x 1/2
FF.234	MF.234	CF.234	4 x 3/8
FF.224	MF.224	CF.224	4 x 5/16
FF.214	MF.214	CF.214	4 x 1/4

SQUARE FILES

	Cat. No.		Size in Inches
FF.76	MF.76	CF.76	6 x 1
FF.66	MF.66	CF.66	6 x 3/4
FF.56	MF.56	CF.56	6 x 5/8
FF.46	MF.46	CF.46	6 x 1/2
FF.36	MF.36	CF.36	6 x 3/8
FF.44	MF.44	CF.44	4 x 1/2
FF.34	MF.34	CF.34	4 x 3/8
FF.24	MF.24	CF.24	4 x 5/16
FF.14	MF.14	CF.14	4 x 1/4

TRIANGULAR FILES

	Cat. No.		Size in Inches
FF.176	MF.176	CF.176	6 x 1
FF.166	MF.166	CF.166	6 x 3/4
FF.156	MF.156	CF.156	6 x 5/8
FF.146	MF.146	CF.146	6 x 1/2
FF.136	MF.136	CF.136	6 x 3/8
FF.144	MF.144	CF.144	4 x 1/2
FF.134	MF.134	CF.134	4 x 3/8
FF.124	MF.124	CF.124	4 x 5/16
FF.114	MF.114	CF.114	4 x 1/4

HALF-ROUND FILES

	Cat. No.		Size in Inches
FF.344	MF.344	CF.344	4 x 1/2
FF.334	MF.334	CF.334	4 x 3/8
FF.324	MF.324	CF.324	4 x 5/16
FF.314	MF.314	CF.314	4 x 1/4

TAPER ROUNDS AND TRIANGLES

	Cat. No.		Size in Inches
Taper Rounds			
FF.644	MF.644	CF.644	4 x 1/2 x 1/4
Taper Triangles			
FF.544	MF.544	CF.544	4 x 1/2 x 1/4

POINTS

	Cat. No.		Size in Inches
FF.723	MF.723	CF.723	3 x 5/16 base

FF—Fine Finish. MF—Medium Finish. CF—Coarse Finish.

"HANDYMAN" POWER WHEELS

"Handyman", Australia's top selling and most popular grinding wheel, has been specially manufactured to fit all well-known home utility drill kits.

ALUMINIUM OXIDE
(Red Label)

Dia.	Thick	Hole	Grit	Grade
3″	× ½″	× ⅛″	Medium / Fine	Medium
4″	× ½″	× ½″	Medium	Medium
5″	× ½″	× ½″	Medium / Fine	Medium

SILICON CARBIDE
(Green Label for Carbide Grinding)

Dia.	Thick	Hole	Grit	Grade
3″	× ½″	× ½″	Medium	Medium
4″	× ½″	× ½″	Medium	Medium
5″	× ½″	× ½″	Medium	Medium

(FINE and COARSE Grits are available to order)

"FIBERLOC" REINFORCED CUTTING OFF WHEELS

GREEN LABEL

This is the wheel which has been acclaimed by tradesmen and handymen. It cuts soft ceramics . . . fibro, cement and bricks, etc. . . . faster than any other wheel. Reinforced for extra life and safety.

Cat. No.	Diam.	Sizes Thick.	Hole
G.4014	4″	3/32″	¼″
G.4056	4″	3/32″	5/16″
G.5012	5″	3/32″	½″
G.5056	5″	3/32″	5/16″
G.6118	6″	3/32″	1⅛″
G.6558	6½″	3/32″	⅝″
G.7058	7″	3/32″	⅝″
G.7078	7″	3/32″	⅞″
G.7118	7″	3/32″	1⅛″
G.8058	8″	3/32″	⅝″
G.8118	8″	3/32″	1⅛″
G.8138	8″	3/32″	1⅜″
G.9058	9″	3/32″	⅝″
G.9078	9″	3/32″	⅞″
G.9138	9″	3/32″	1⅜″
G.0138	10″	3/32″	1⅜
G.1210	12″	⅛″	1″

GREEN LABEL SPECIAL

Identified by the new Green Label Special wording and the black stripe across the wheel itself. Developed for the fast cutting of extra hard ceramics . . . aggregate reinforced concrete, glazed pipes, tiles, etc. In larger sizes for more powerful machines.

Cat. No.	Diam.	Sizes Thick.	Hole
SG.6118	6″	3/32″	1⅛″
SG.6558	6½″	3/32″	⅝″
SG.7078	7″	3/32″	⅞″
SG.7118	7″	3/32″	1⅛″
SG.8058	8″	3/32″	⅝″
SG.8118	8″	3/32″	1⅛″
SG.8138	8″	3/32″	1⅜″
SG.9058	9″	3/32″	⅝″
SG.9078	9″	3/32″	⅞″
SG.9138	9″	3/32″	1⅜″

RED LABEL

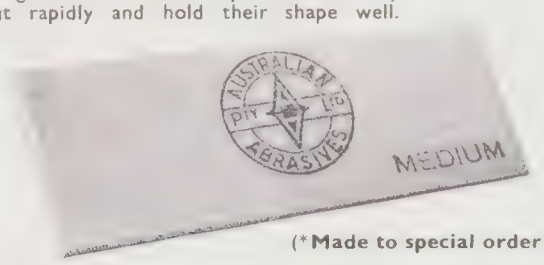
Tradesmen and handymen use this wheel for the economical cutting of all types of metal in building construction and around the home. Available in all sizes from 4″ to 10″.

Cat. No.	Diam.	Sizes Thick.	Hole
G.4014	4″	3/32″	¼″
G.4056	4″	3/32″	5/16″
G.5012	5″	3/32″	½″
G.5056	5″	3/32″	5/16″
G.6118	6″	3/32″	1⅛″
G.6558	6½″	3/32″	⅝″
G.7058	7″	3/32″	⅝″
G.7078	7″	3/32″	⅞″
G.7118	7″	3/32″	1⅛″
G.8058	8″	3/32″	⅝″
G.8118	8″	3/32″	1⅛″
G.8138	8″	3/32″	1⅜″
G.9058	9″	3/32″	⅝″
G.9078	9″	3/32″	⅞″
G.9138	9″	3/32″	1⅜″
G.0138	10″	3/32″	1⅜″
G.1210	12″	⅛″	1″

SHARPENING PRODUCTS

SLIP STONES (Silicon Carbide)

These stones are made in four sizes for gouge chisels and other special work. They cut rapidly and hold their shape well.



(*Made to special order only.)

Cat. No.	Length Inches	Width Inches	Thickness Inches		Grit
177	4½	1¾	¼	1/16	Fine
178	4½	1¾	¼	1/16	Medium
179	4½	1¾	¼	1/16	Coarse
180	4½	2⅛	⅝	5/16	Fine
181	4½	2⅛	⅝	5/16	Medium
182	4½	2⅛	⅝	5/16	Coarse
183	4½	1¾	½	3/16	Fine
184	4½	1¾	½	3/16	Medium
185	4½	1¾	½	3/16	Coarse
186	4	1	7/16	3/16	Fine
187	4	1	7/16	3/16	Medium
189	4	1	7/16	3/16	Coarse

Cat. No.	Length Inches	Width Inches	Thickness Inches		Grit
*FS.66	6	2¼	¾	⅜	Fine
*MS.66					Medium
*FS.54					Fine
*MS.54	4½	2⅛	⅝	2/16	Medium
*CS.54					Coarse
*FS.15					Fine
*MS.15	5	1	5/16	3/32	Medium
*CS.15					Coarse
FS.44					Fine
MS.44	4½	1¾	½	3/16	Medium
*CS.44					Coarse

Cat. No.	Length Inches	Width Inches	Thickness Inches		Grit
*FS.34					Fine
*MS.34	4½	1¾	⅜	⅛	Medium
*CS.34					Coarse
FS.24					Fine
*MS.24	4½	1¾	¼	1/16	Medium
CS.24					Coarse
*FS.14					Fine
*MS.14	4	1	7/16	3/16	Medium
*CS.14					Coarse

SLIP STONES (Aluminium Oxide)

Produce oilstoned finishes on gouges, moulder knives, bead planer and other tools and knives with curved edges.

(*Made to special order only.)

"DOUBLE A" GRINDING WHEELS

POWER GRINDING WHEELS — TO FIT FULL RANGE OF BENCH GRINDERS

No stocking problems — supplied with each "Double A" wheel is a set of four pushout plastic bushes — standard bore of 1" can be reduced to ⅞" — ¾" - ⅝" — ½".

ALUMINIUM OXIDE — Red Label

Cat. No.	Wheel Size	Specification
A5124	5 x ½ x ½	46 (Coarse)
A5126	5 x ½ x ½	60 (Medium)
A6344	6 x ¾ x 1	46 (Coarse)
A6346	6 x ¾ x 1	60 (Medium)
A6348	6 x ¾ x 1	80 (Fine)
A6104	6 x 1 x 1	46 (Coarse)
A6106	6 x 1 x 1	60 (Medium)
A6108	6 x 1 x 1	80 (Fine
A7344	7 x ¾ x 1	46 (Coarse)
A7346	7 x ¾ x 1	60 (Medium)
A7348	7 x ¾ x 1	80 (Fine)
A8104	8 x 1 x 1	46 (Coarse)
A8106	8 x 1 x 1	60 (Medium)
A8108	8 x 1 x 1	80 (Fine)
SILICON CARBIDE — Green Label		
C6346	6 x ¾ x 1	60 (Medium)
C6106	6 x 1 x 1	60 (Medium)

COATED ABRASIVES

The principal Coated Abrasives used today are:—
WOOD WORKING
Aluminium Oxide Paper and Cloth
Glass Paper
Garnet Paper and Cloth
METAL WORKING
Aluminium Oxide
Silicon Carbide
Emery

Glass Paper:—used in sheet form for hand use only.

Garnet Paper and Cloth:—paper is made in a range of weights of backing for work from fine finishing to machine sanding, cloth is used for Belt sanding and some Disc Work.

Aluminium Oxide or Production Paper and Cloth:—have similar applications to Garnet with added advantage of being more suitable for the High Speed Machinery being used today. Both Garnet and Production Paper and Cloth are obtained in open coating for work that loads abrasive cloth or paper, or close coating for faster cutting and better finishing work on harder types of wood.

Aluminium Oxide is available in **Three-m-ite** (Glue bonded material) for lighter mechanical sanding operations. For heavier sanding work **Three-m-ite Resinite** material is recommended. **Three-m-ite Resinite** has the advantage of repelling frictional heat and also because of its special bonding it offers greater resistance to atmospheric conditions than does **Three-m-ite**.

The material is extensively used in machine work in the Metal Working Industry with very satisfactory results and can be supplied in Sheets, Rolls, Utility Rolls, Belts and Discs for a variety of Grinding and Finishing Work. Aluminium Oxide is the abrasive used in the manufacture of Type C Discs which are Resinbonded, Fibre Backed and sold in 7″ and 9⅛″ diameters for almost any application of wood or metal work sanding and grinding.

Silicon Carbide:—is the hardest and sharpest abrasive in general use and is obtained in Tri-M-ite Wetordry hand rubbing sheets as well as Tri-M-ite Resinite cloth for special Belt Grinding and Polishing and also Tri-M-ite Floor Sanding Combination.

Emery Paper or White Back Emery:—is the lowest priced metal working abrasive suitable for polishing or cleaning work such as Rust or Grease removal.

Blue Back Emery is superior to white back emery because of the strength of the backing. Both White Back and Blue Back Emery is sold in sheet form.

COMPARATIVE GRIT SIZE

New Gradings		Silicon Carbide	Aluminium Oxide	Garnet	English Emery	English Glass
Very Fine	600-12/0	600	—	—	—	
	600-11/0	500	500			—
	400-10/0	400	400			
	360	360				
	320-9/0	320	320			
	280-8/0	280	280	8/0-280	2/0	F. Flour
	240-7/0	240	240	7/0-240	1/0	Flour
	220-6/0	220	220	6/0-220		0
Fine	180-5/0	180	180	5/0-180	C/0	
						F
	150-4/0	150	150	4/0-150	F.F.	
						1
	120-3/0	120	120	3/0-120	F	
	100-2/0	100	100	2/0-100		1½
					1	
Medium						F2
	80-1/0	80	80	1/0-80	1½	
					2	
	60-1/2	60	60	1/2-60		M2
					2½	
	50-1	50	50	1-50		S2
					3	
Coarse	40-1½	40	40	1½-40		2½
	36-2	36	36	2-36		—
						3
	30-2½	30	30	2½-30	4	—
Very Coarse	24-3	24	24	3-24		3½
	20-3½	20	20	3½-20		4
	16-4	16	16			
	12-4½	12	12			

SHEETS

L500 GLASS PAPER

Sheets 9″ x 11″
Grades 00, 0, 1, 1½, F2, M2, S2, 2, 2½, 3

GARNET PAPER L501

Sheets 9″ x 11″
"A" Weight Finishing
80 100 120 150 180 240
Cabinet 40 60 80 Dop GARNET PAPER
40 60 80 100 120

L502 THREE-M-ITE ALUMINIUM OXIDE CLOTH

Sheets 9″ x 11″
J Weight and X Weight
Grit Size 320 240 180 150 120 100 80 60 50 40 36 24

L503 WET OR DRY PAPER SILICON CARBIDE

TRI-M-ITE

Sheets 9″ x 11″

Backing	Grit Size
A	600 500 400 320
C	400 320 280 240 220 180 150 120 100 80
D	120 150 80 60

L504 EMERY CLOTH Blue Twill

Sheet Size 9″ x 11″
Grit Size 00 0 F 1 1½ 2 2½ 3

L505 EMERY CLOTH White Back

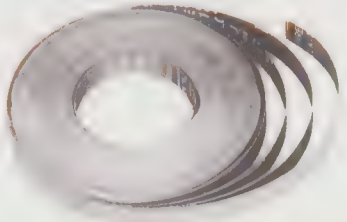
Sheet Size 9″ x 11″
Grit Size 00 0 F 1 1½ 2 2½ 3

ROLLS

L506 UTILITY ROLLS

Packed in Handy Dispenser

THREE-M-ITE CLOTH ALUMINIUM OXIDE
Widths 1″ 1½″ 2″
Lengths 50 yards
Grit Size 320 240 180 150 120 100 80 60 50 40 36 24



L507 GARNET PAPER & CLOTH

Open and Closed Coat
Width up to 48″ wide
Grit Size 180 150 120 100 80 60 50 40 36 24

L508 PRODUCTION PAPER & CLOTH

Open and Closed Coating
Width up to 50″
Grit Size 320 240 180 150 120 100 80 60 50 40 36 30 24 20

L509 THREE-M-ITE CLOTH ALUMINIUM OXIDE

Closed Coating only
Width up to 50″
Grit Size 320 240 180 150 120 100 80 60 50 40 36 24

L510 THREE-M-ITE "RESINITE" CLOTH ALUMINIUM OXIDE

Closed Coating only
Width up to 50″
Grit Size 320 240 180 150 120 100 80 60 50 40 36 24

BELTS

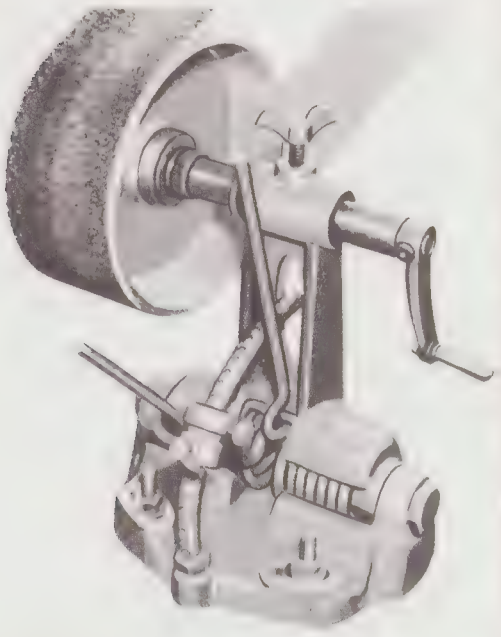
THREE-M-ITE CLOTH
THREE-M-ITE RESIN BOND CLOTH
TRI-M-ITE RESINITE CLOTH
GARNET CLOTH AND PAPER
PRODUCTION CLOTH AND PAPER

Grit Size 320 240 180 150 120 100 80 60 50 40 36 24

Standard Sizes — Available from Stock

Off Standard Belts for wood or metal sanding can be supplied in width, length, grit size and material to your specifications

BACKSTAND IDLER



For Belts up to 4″ Wide
Adjustable Tracking
Adjustable Spring Tension
Speedy Belt Change
Quickly installed

LINSHALL BELT GRINDING ATTACHMENT

Available in Models to suit Bench and Portable Grinders.

Belt Lengths
24″ 27″ 48″ 96″

TREFFNER DRUM SANDERS

PNEUMATIC OR SOLID RUBBER

PNEUMATIC

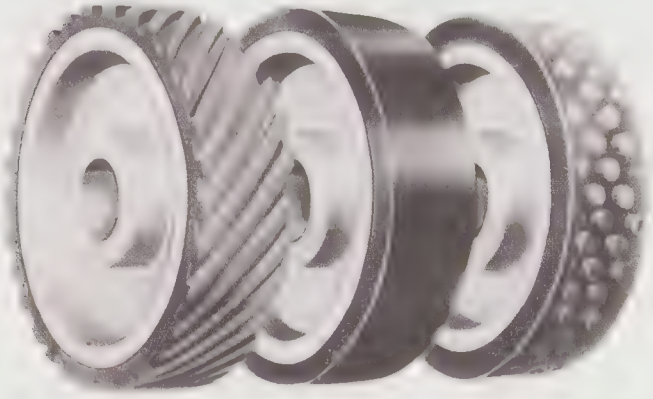
Diameter	3″	5″	5″	6″	6″	6″
Width	2″	2″	3″	2″	3″	4″

SOLID RUBBER

Diameter	1″	1½″	2″	3″
Width	1″	1″	1″	2″

1″ 1½″ 2″ 3″ Supplied with ¼″ Shank
3″ Solid Rubber and all Pneumatic Sizes Supplied with ½″ Shank or Female Thread to Suit Bench or Pneumatic Grinders

"ABRASIVE AIDS" CONTACT WHEELS



SERRATED PLAIN STUDDED (with safe edge)

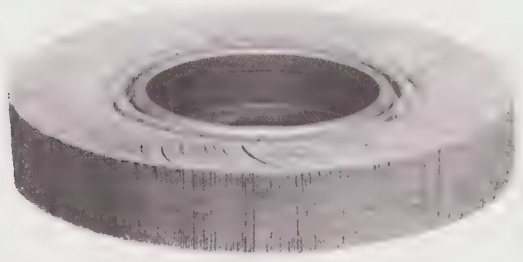
TYRE REMOVAL AND REPLACEMENT TOOL

Available for all the above sizes to enable speedy replacement of the tyre section in your own shop.
The replaceable pure neoprene rubber tyre section is available in densities from 30 to 90 durometer in five point graduations.
The tyre section is also available in other materials to special order.

SIZES AVAILABLE:

Face	Diameter (Inches)	Maximum width (Inches)	Standard Bore Diam. (Inches)
Serrated and Plain	14	6	1½
Serrated and Plain	12	6	1½
Serrated and Plain	10	6	1½
Serrated and Plain	8	6	1½
Serrated and Plain	6	4	1
Serrated and Plain	4	4	1
Plain	2½	1 only	to suit 6201 ball races
Studded(safe edge)	8	2 only	1½
Studded(safe edge)	4	2 only	1
Studded(safe edge)	3	2 only	¾
Studded(safe edge)	2½	2 only	¾

3M "PG" WHEEL



Face Widths 1″ 1½″ 2″ 3″ 4″ 5″ 6″

Diameters 6″ 7″ 8″ 9″ 10″ 11″ 12″ 13″ 14″ 15″ 16″ 17″ 18″

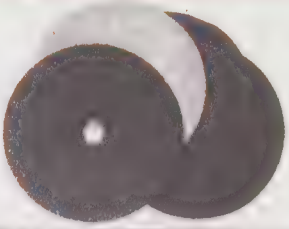
Available for all types of Polishing and Grinding.

SURFACE SPEED FEET PER MIN.

Spindle R.P.M.	Wheel Diameter						
	6	8	10	12	14	16	18
1600	2513	3351	4189	5026	5864	6703	7540
1700	2670	3560	4451	5340	6230	7121	8011
1800	2827	3770	4713	5654	6597	7540	8482
1900	2984	3979	4975	5969	6963	7959	8954
2000	3141	4189	5236	6283	7330	8378	9425
2100	3298	4398	5498	6597	7696	8797	9896
2200	3455	4608	5760	6911	8063	9215	10367
2300	3612	4817	6022	7225	8429	9634	10839
2400	3770	5027	6284	7540	8796	10053	11310
2500	3927	5236	6545	7854	9162	10471	11781
2600	4084	5445	6807	8168	9520	10890	12253
2700	4241	5655	7069	8482	9895	11309	12724
2800	4398	5864	7331	8796	10262	11728	13196
2900	4555	6074	7592	9110	10629	12147	13667
3000	4712	6283	7854	9425	10996	12566	14137
3200	5026	6702	8378	10053	11729	13404	15079
3400	5340	7121	8901	10681	12462	14242	16022
3600	5654	7539	9425	11309	13193	15079	16964
3800	5969	7958	9948	11938	13927	15917	17907
4000	6283	8377	10472	12566	14661	16755	18850

DISCS

SIZES 7″ and 9⅛″
GRITS 16 24 36 40 50 60 80 100 120

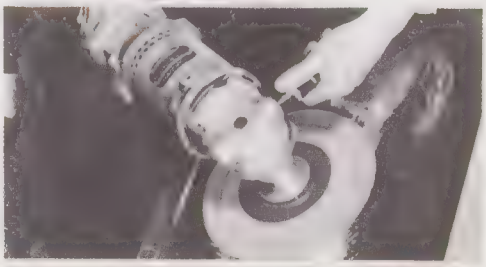


TYPE C

The most versatile abrasive Disc in use, designed for the most rugged grinding operations, such as heavy weld removal.

TYPE B

Fibre Combination Open Coat Disc, is best suited for work that is inclined to clog the surface of the disc such as the removing of old paint or rust and for soft metal grinding.



TYPE A

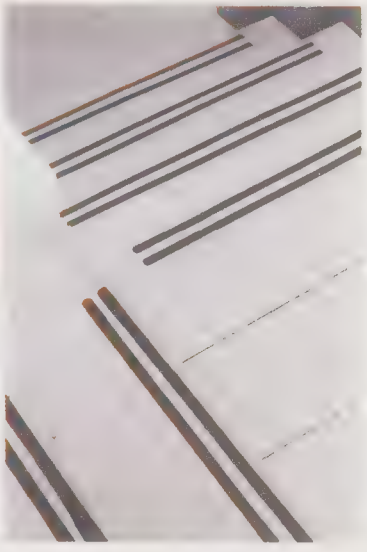
Close Coat Fibre Combination Disc, used mainly for finishing or blending operations on metal.

3M BACK UP PAD ASSEMBLY

This equipment can be fitted to any of the principal makes of portable sanders and is made up of an interchangeable retainer nut of Aluminium Head and special Fibre Plates 5″ 7″ and 9″ diameter allowing for its use with Discs of these sizes.

SAFETY WALK

NON SLIP SURFACING



For Stairways, Ramps, Corridors, Workshop & Factory Floors

Type B Medium Grade
Standard Cleat Sizes ¾″ x 24″, 6″ x 24″
Also supplied in Rolls 24″ x 96ft. 6″ x 96ft. 2″ x 96ft. ¾″ x 96ft.
Special Rolls can be Supplied to Suit your needs.

SCOTCH BRAND INDUSTRIAL PRESSURE SENSITIVE TAPES

Tape Number	Type	Application	Length of Rolls	Stock Width
233	MASKING TAPE	For all Masking Operations, Non Flaking, Quick Gripping, Easy Releasing, Comformable	60 yards	¼″ ⅜″ ½″ ¾″ 1″ 1½″ 2″
250	PACKAGING TAPE	For Bundling, Holding and Packaging Operations common throughout industry, High Tensile Strength, Moisture Resistant, Printable	60 yards	¼″ ⅜″ ½″ ¾″ 1″ 1¼″ 1½″ 2″
341 344	PROTECTIVE TAPE INTERIOR EXTERIOR	For Protecting Polished Metal, Painted and Aluminium Sheets and Surfaces, Prefabricated Parts and Appliances	100 yards 100 ,,	36″ 48″ 36 48″ (Can be split to size on application)
365	GLASS CLOTH TAPE	For Splicing or Insulation applications requiring High Tensile Strength or Resistance to High Temperatures. Welding Back up Replacing Bead and Back of Strips. Non Corrosive, Wrap on Stainless Steel and Hot Air Duct Work	60 yards	½″ ¾″ 1
371	SILVER DUCT TAPE	For Joining and Holding Lagging Blankets and General Duct work, will stand temperatures up to 200°F	60 yards	½″ ¾″ 1″ 1½″ 2″
410 401	DOUBLE-SIDED TAPE	Mounting Printing Plates. Glazing Strip to secure glass in metal door frames	36 yards 5 yards	¼″ ½″ ¾″ 1″ 1½″ 2″ 11¼″ 12″
420	LEAD FOIL TAPE	Masking in Electroplating, Radiation and Moisture Barrier in X-Ray Operations, Good Conductor of Electrical Current	36 yards	½″ 1″
425	ALUMINIUM FOIL TAPE	Similar application to No. 420. Heat Reflecting, Non-contaminating in Plating Solutions	60 yards	½″ 1″
465	ADHESIVE TRANSFER TAPE	For Splicing, Poster Mounting, Laminating, Pressure Sensitive Backing for Paper, Plastic, Metal, Cloth, Wood, Glass	60 yards	¼″ ½″ ¾″ 1″ 11¾″ 17¾″
470	ELECTROPLATING TAPE	Transparent Vinyl Backing, Resists most Chemicals in Electroplating, Masking Flat and Uneven Surfaces	36 yards	½″ ¾″ 1″
471	LAME MARKING TAPE (Coloured)	Waterproof for Floor Marking, Can and Bottle Sealing, Decorative Striping Indoors, Marking Squash Courts, etc. Yellow, White, Black, Red, Blue and Green	36 yards	¼″ ½″ ¾″ 1″ 1½″ 2″
546	TEFLON TAPE (Non-Pressure Sensitive)	Used for Gaskets Exposed to Corrosive Chemicals, Bottle Cap Liners	36 yards	¼″ ⅜″ ½″ ⅝″ ¾″ 1″
547	PIPE SEALANT TEFLON TAPE (Non-Pressure Sensitive)	Principally used for Pipe Sealant. Unaffected by Acids, Gases or Organic Solvents	36 yards	½″ ¾″ 1″
549	PRESSURE SENSITIVE TEFLON TAPE	Anti-friction Surface is provided by application to surface subject to rubbing. Easy Release Surface on Rollers, Plates, Belts, etc. Temperature Range 65–400 F	36 yards	¼″ ⅜″ ½″ ⅝″ ¾″ ⅞″ 1″ 1½″ 2″
583	"SCOTCH WELD" BONDING TAPE	Plate and Block Mounting in Printing Industry, Paper Splicing, General Industrial Laminations of Wood, Metal, Cloth, Plastics, Heat or Solvent Activated Adhesive	60 yards	¼″ ½″ ¾″ ⅞″ 1″
600	TRANSPARENT & COLOURED CELLULOSE TAPE	Printable, General Purpose Packaging, One Hundred and One Uses, Box Sealing, Holding, Bundling, etc. Colours: White, Yellow, Red, Black, Dark Blue, Dark Green, Light Blue	72 yards	¼″ ⅜″ ½″ ⅝″ ¾″ 1″ 1½″ 2″
616	LITHOGRAPHIC TAPE	Developed for Opaquing, Edging and Stripping Negatives in Lithographic work	72 yards	¼″ ½″ ¾″ 1″
666	DOUBLE-SIDED TAPE	Attaching Riders or Endorsements to Insurance Policies, etc. Mounting Display Items, etc.	36 yards	¼″ ½″ ¾″ 1″
681	PAKLON TAPE	Printable, Moisture Resistant, for Packaging, Box Sealing, Holding and Bundling	72 yards	¼″ ⅜″ ½″ ⅝″ ¾″ 1″
688	P.V.C. TAPE	Transparent and Coloured — Printable, Waterproof, Carton Sealing, Label Protection, Bag Sealing, Coding and Decorating, Joining Plastic Sheeting. Red, White, Yellow, Light Blue, Light Green	72 yards	¼″ ⅜″ ½″ ⅝″ ¾″ 1″ 1½″ 2″
800	ACETATE FILM TAPE	Water Clear, Printable, Chemical and Moisture Resistant, Non-oozing Label Covering for Drugs, Shipping Tickets, Mending Valuable Documents	36 yards	½″ ¾″ 1″ 1½″ 2″
810	MAGIC MENDING TAPE	Printable, Mending Tracings, Drawings, Books, Blue Prints, etc. Blends with most papers. Can be written on	72 yards 36 yards	½″ ¾″ 1″
850	POLYESTER TAPE	Metalised Polyester, excellent Chemical and Thermal Stability, Decorative Stripping, Electroplating Coding, Sealing and Labelling. Gold, Silver, Black	50 yards	¼″ ½″ ¾″ 1″
880	RAYON FILAMENT TAPE ("Scotchbar" Polyester Film)	Transparent and Coloured, Printable, Closing and Reinforcing Cartons, Bundling, Tubing, Rods, Lumber, Palleting, Unitizing Boxes, Bagged or Drummed Materials. Colours: White, Red, Black, Blue	50 yards	¼ ⅜″ ½ ¾ 1

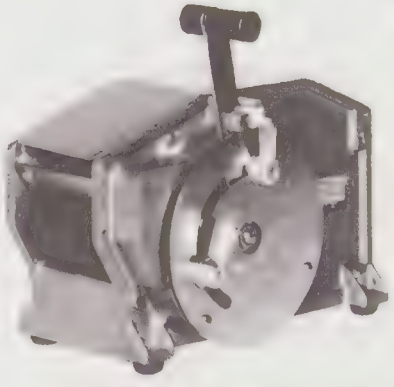
Tape Number	Type	Application	Length of Rolls	Stock Width
898	GLASS FILAMENT TAPE	Printable, Transparent only, similar application to No. 880, stronger version, Higher Breaking Strain	50 yards	$\frac{1}{4}''$ $\frac{3}{8}''$ $\frac{1}{2}''$ $\frac{3}{4}''$ 1″
1222	AUTOCLAVE TAPE	Sealing Wrapped Packs containing Gloves, Towels, Surgery Packs, Dressings, etc. Tell at a glance if pack has been Autoclaved or not, turns brown through Autoclave Cycle	60 yards	$\frac{1}{4}''$ $\frac{1}{2}''$ $\frac{3}{4}''$ 1″
	"SCOTCH FOAM"	Single Coated Foam Tape, Principally Sealing or Padding Medium Around Doors and Windows	36 yards $\frac{1}{16}''$ & $\frac{1}{8}''$ Thick	$\frac{1}{4}''$ $\frac{3}{8}''$ $\frac{1}{2}''$ $\frac{5}{8}''$ $\frac{7}{8}''$ 1″
			18 yards $\frac{1}{4}''$ Thick	$\frac{1}{4}''$ $\frac{3}{8}''$ $\frac{1}{2}''$ $\frac{5}{8}''$ $\frac{7}{8}''$ 1″
	"SCOTCH MOUNT"	Double Coated Foam Tape, Instant and Permanent Mounting of a Wide Range of Objects to any clean, Unified Surface	72 yards $\frac{1}{32}''$ Thick	$\frac{1}{4}''$ $\frac{3}{8}''$ $\frac{1}{2}''$ $\frac{5}{8}''$ $\frac{3}{4}''$ $\frac{7}{8}''$ 1″
			36 yards $\frac{1}{16}''$ & $\frac{1}{8}''$ Thick	$\frac{1}{4}''$ $\frac{3}{8}''$ $\frac{1}{2}''$ $\frac{5}{8}''$ $\frac{3}{4}''$ $\frac{7}{8}''$ 1″
			18 yards $\frac{1}{4}''$ Thick	$\frac{1}{4}''$ $\frac{3}{8}''$ $\frac{1}{2}''$ $\frac{5}{8}''$ $\frac{3}{4}''$ $\frac{7}{8}''$ 1

TAPE DISPENSERS

MANUAL, SEMI AND FULL AUTOMATIC DISPENSERS AND TAPING MACHINES AVAILABLE FOR THE FULL RANGE OF MORE THAN 400 PRESSURE SENSITIVE TAPES

Decor Dispenser, CA-15
For office or home use
36 yd. Rolls up to 1″ wide.

Bracket Dispenser, M-73
Accommodates "SCOTCH" Brand Paper, Transparent Acetate Film Tapes up to 1″ on a 3″ core. Screws onto benches etc. in most convenient location.

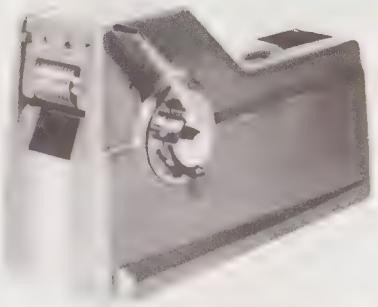


Definite Length Dispenser, M-851
Dispenses "SCOTCH" Brand Filament, Paper, Acetate Fibre or Plastic Tapes in pre-determined lengths.

Heavy Duty Dispenser, CA-23
For office or factory
72 yd. Rolls up to 1″ wide.

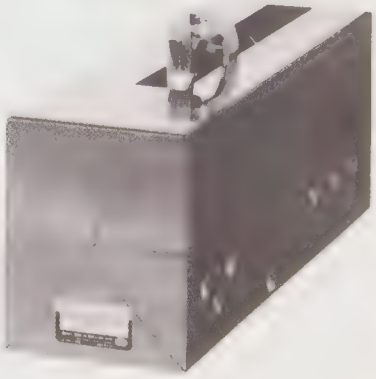
Double Coated Tape Dispenser, M-711
Dispenses double coated tissue tapes, such as 410, 401 etc. with liner automatically removed.

TAPE DISPENSERS



Definite Length Dispenser, M-92
Accommodates tapes up to 1″.
Dispenses strips up to 4″
long with one stroke of
lever. Excellent for printed tapes.

Filament Tape Hand Dispenser, H-10
Unbreakable plastic.

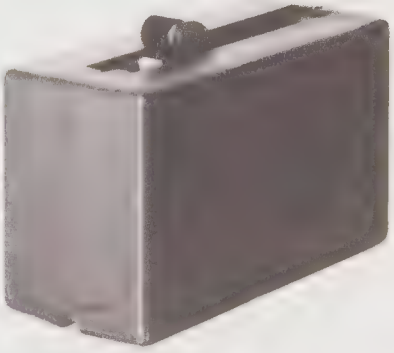


Manual Box Sealer, S-634
Dispenses most "SCOTCH"
Brand Pressure-sensitive
Tapes including Filament
Tapes $\frac{3}{8}$″ to $\frac{3}{4}$″ in width.
Applies a 4″ long
"L" clip to boxes etc.

Bag Sealer, P3L/S
Simple, fast, economical bag sealer
for closing necks of bags.
Incorporates an easy opening
tab making bags resealable.

Hand Dispenser, HA-123
A portable dispenser
for packaging tapes up to 2″ wide.

Manual Tube Sealer, MA741
For use with tapes up to 1″ wide.



Manual Box Sealer, C-1
Accommodates "SCOTCH
Brand tapes up to $\frac{1}{2}$″ width
on a 3″ core. Seals
boxes, bags of sugar etc.
with "L" clip.

Packing Slip Dispenser, T-13
This system enables
packing slips/invoices to travel
safely with goods.

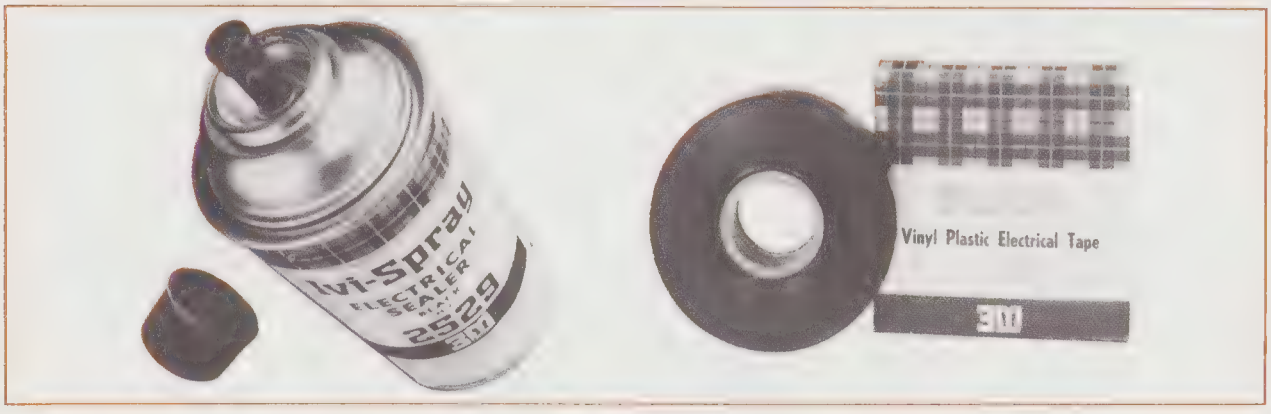
SCOTCH BRAND ELECTRICAL PRODUCTS

SCOTCH BRAND ELECTRICAL TAPES

Tape No.	Thickness	Roll Width x Length	Suggested Uses
33	.007″	¾″ x 20′ ¾″ x 66′ ¾″ x 36 yds.	Vinyl Plastic High Quality General Purpose Insulating Tape — Oil resistant — Dielectric 9500v.
22	.010″	1″ x 36 yds. 1½″ x 36 yds. 2″ x 36 yds.	Vinyl Plastic Heavy Duty Insulating Tape — Dielectric V11,000.
18	.005″	¾″ x 20′	Vinyl Plastic Phase Identification Tape — Red, Yellow, Green, Black.
99	.008″	¾″ x 66′	Vinyl Plastic 105°C Oil Resistant — Dielectric 9350V.
27	.0065″	¾″ x 66′	Glass Tape — All common Wire Splicing in High Heat Areas 300°F.

SCOTCH BRAND ELECTRICAL TAPES

Tape Number	Thickness	Roll Width x Length	Suggested Uses
23	.030″	¾″ x 30′	Instant Fusing — easy to use — No. 23 provides Corova-Resistant Insulation on all high voltage rubber, synthetic or Plastic insulated cable joints and terminations.
70	.015″	¾″ x 30′	Class "H" — The Silicon Rubber Surface of No. 70 resists long term exposure to Arc Tracking and External Corova discharge.
13	.030″	¾″ x 15′	Semi-Conducting Tape — Reduces electrical stress in splice areas.
24		1″ x 15′	Tinned Copper Wire Shielding Braid.
Scotchfill	.125″	1½″ x 60″	An insulating compound in tape form.

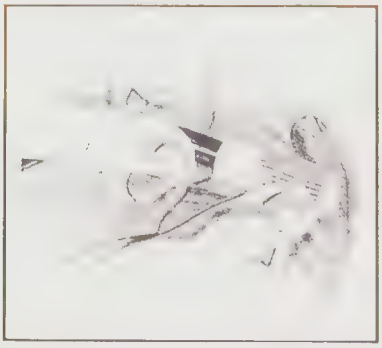


I V I SPRAY	12 oz. Can	Electrical Grade Paint in Aerosol Can — Red, Grey, Black.
Scotchkote	8 oz. Brush Top Can	Electrical Coating — fast drying sealant — resists Oil, Acids, Alkalis and Corrosive Atmospheric conditions.
No. 210	6 oz. Tubes	Two Part Epoxy Sealer — Thixotropic Electrical.

SCOTCHHLOK BRAND CONNECTORS

ELECTRICAL SPRING CONNECTORS

Size	Standard Pack	Normal Usage
S	100 per Box	Uninsulated Connector mainly used on lighting circuits.
M	100 per Box	Uninsulated Connector mainly used on power circuits.
L	100 per Box	Uninsulated Connector mainly used on power circuits.
D	50 per Box	Uninsulated Connectors mainly used on power circuits.
Y	100 per Box	Insulated Connectors mainly used on lighting circuits.
R	100 per Box	Insulated Connectors mainly used on power circuits.
B	100 per Box	Insulated Connectors mainly used on power circuits.
UR-UG	100 per box	Joining telephone cables. Teeing off telephone cables.



SCOTCH BRAND ELECTRICAL PRODUCTS

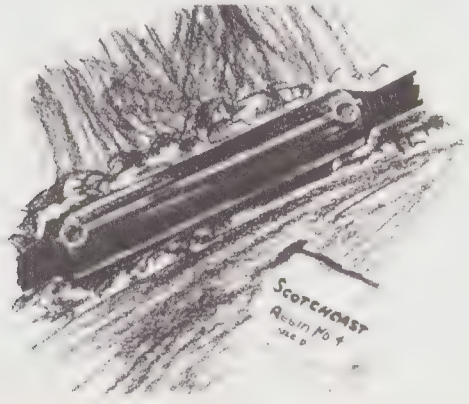
SCOTCHCAST RESIN SPLICING AND TERMINATION KITS

POWER SUPPLY

Kit Number	Cable Size
INLINE SPLICING	
82-A1	$\frac{1}{4}$″ to $\frac{5}{8}$″ O.D. Synthetic Insulated Cable
82-A2	$\frac{5}{8}$″ to 1″ O.D. Synthetic Insulated Cable
82-A3	1″ to $1\frac{7}{16}$″ O.D. Synthetic Insulated Cable
92-A4	$1\frac{5}{8}$″ to $2\frac{1}{4}$″ O.D. Synthetic Insulated Cable
TEE OFF OR "Y" OFF KITS	
90-B1	$\frac{1}{4}$″ to $\frac{5}{8}$″ "Y" Off Kit with large jointing bawle for line clamp
82-B1	$\frac{1}{4}$″ to $\frac{5}{8}$″ "Y" Off Kits
92-T2	$\frac{5}{8}$″ to $1\frac{1}{4}$″ Tee Off Kits
COMMUNICATION	
89-D1	$\frac{1}{4}$″ to $\frac{5}{8}$″ O.D.
89-D2	$\frac{5}{8}$″ to 1″ O.D.
89-D3	1″ to $1\frac{7}{16}$″ O.D.

TERMINATION

Kit Number	Cable Size
SINGLE CORE 11 K.V.	
83-A3	Outdoor up to.3 sq. ins.
83-B3	Indoor up to.3 sq. ins.
83-A4	Outdoor.3 sq. ins. to.75 sq. ins.
83-4B	Indoor.3 sq. ins. to.75 sq. ins.
THREE CORE 11 K.V.	
93-KS 1A	Outdoor up to.4 sq. ins.
93-KS 1B	Indoor up to.4 sq. ins.
LOW TENSION	
92-S1	Indoor up to .06 sq. ins.
92-S2	Indoor .06 to .1 sq. in.
92-S3	Indoor 1.5 to .3 sq. ins.
92-S6	Indoor.4 to .75 sq. ins.
AD-B2	Outdoor up to .3 sq. ins.



ELECTRICAL TAPES FOR ORIGINAL EQUIPMENT MANUFACTURE

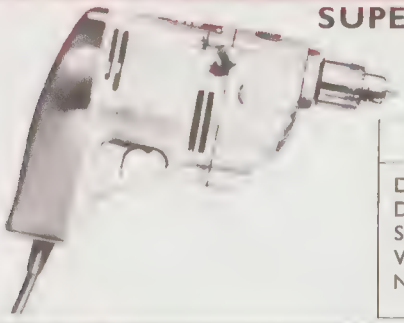
Tape Number	Thickness	Suggested Uses
3	.005″	Class "A" 105°C. Flat back paper tape
38	.011″	Class "A" 105°C. Crepe back tape
5	.0025″	Class "B" 130°C. Clear Polyester
56	.0025″	Class "B" 130°C Yellow Polyester
6	.0035″	Class "A" 105°C. Blue Acetate
22	.010″	Class "O" 80°C. Black Plastic
33	.005″	Class "O" 80°C. Black Plastic
27	.007″	Class "B" 130°C. Glass Cloth
69	.007″	Class "H" 180°C. Glass Cloth
28	.008″	Class "A" 105°C. Acetate Cloth *
60	.0035″	Class "H" 180°C. T.F.E. Fluorocarbon
61	.006″	Class "H" 180°C. T.F.E. Fluorocarbon

* Printable

ELECTRIC MOTOR INSULATION — F/I SYSTEM

Tape Number	Thickness	Suggested Uses
Fibremat No. 4310	.005″ .007″ .009″	Class "F" Epoxy Coated Polyester Web "Isomica" Epoxy Bonded Glass Cloth Mica Cloth
No. 4320	.005″ .0075″ .0095″	"Isomica" Epoxy Bonded Glass Cloth Mica Sheet
No. 298	One Quart 2 lbs.	Epoxy Sealer for sealing coil end leads as they come from main winding
XP 126		"Scotchply" Epoxy impregnated glass filament bonding tape
No. 1205	$\frac{1}{16}$″ O.D.	"Scotchply" Epoxy impregnated glass cord

Wolf PORTABLE ELECTRIC DRILLS



SUPER SAFETY MASTER $\frac{5}{16}$" Capacity Double Insulated Drill
Colt 45 MK2 $\frac{5}{16}$" Capacity Drill
CM2 $\frac{3}{8}$" Capacity Two Speed Drill

Specification	SSM	Colt 45	CM2
Drilling Capacity in Steel	$\frac{5}{16}$"	$\frac{5}{16}$"	$\frac{3}{8}$"
Drilling Capacity in Hardwood	$\frac{5}{8}$"	$\frac{5}{8}$"	$\frac{3}{4}$"
Spindle Speed running Light	3600 RPM	2400 RPM	2900/1200 RPM
Watts input on full Load	325 Watts	240 Watts	240 Watts
Nett weight	$3\frac{3}{4}$ lbs.	3 lbs.	4 lbs.

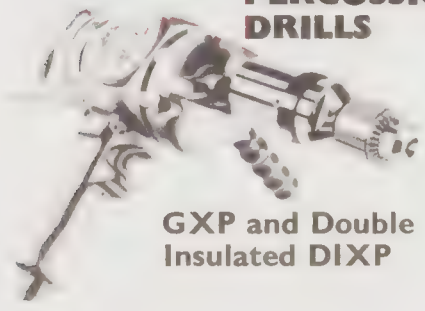
AIK2C $\frac{1}{4}$" Sapphire All-Insulated Heavy Duty Drills
AIK17C $\frac{5}{16}$" Sapphire All-Insulated Heavy Duty Drills
AIK3C $\frac{3}{8}$" Sapphire All-Insulated Heavy Duty Drills
AIK4C $\frac{1}{2}$" Sapphire All-Insulated Heavy Duty Drills

Specification	AIK2C	AIK17C	AIK3C	AIK4C
Drilling capacity in steel	$\frac{1}{4}$"	$\frac{5}{16}$"	$\frac{3}{8}$"	$\frac{1}{2}$"
Drilling capacity in hardwood	$\frac{3}{8}$"	$\frac{3}{4}$"	$\frac{7}{8}$"	1"
Spindle speed running light	2750 RPMP	1500 RPM	1150 RPM	700 RPM
Spindle speed on full load	1900 RPM	1050 RPM	780 RPM	475 RPM
Watts input on full load	280 Watts	280 Watts	280 Watts	360 Watts
Overall length	$8\frac{13}{16}$"	$9\frac{1}{4}$"	$9\frac{5}{8}$"	14"
Centre of spindle to Outer casing	$1\frac{1}{32}$"	$1\frac{7}{16}$"	$1\frac{7}{16}$"	$1\frac{7}{16}$"
Nett Weight	4 lbs. 6 ozs.	4 lbs. 15 ozs.	5 lbs.	$6\frac{1}{2}$ lbs.

$\frac{1}{4}$" Beretta General Duty Drill
$\frac{3}{8}$" Beretta General Duty Drill
$\frac{3}{8}$" Two Speed Beretta General Duty Drill
$\frac{1}{2}$" Beretta General Duty Drill

Specification	$\frac{1}{4}$" Beretta	$\frac{3}{8}$" Beretta	$\frac{3}{8}$" Two Speed Beretta	$\frac{1}{2}$" Beretta
Drilling capacity in steel	$\frac{1}{4}$"	$\frac{3}{8}$"	$\frac{3}{8}$"	$\frac{1}{2}$"
Drilling capacity in hardwood	$\frac{1}{2}$"	$\frac{5}{8}$"	$\frac{3}{4}$"	1"
Spindle speed running light	2800 RPM	850 RPM	2900/900 RPM	650 RPM
Spindle speed on full load	1600 RPM	550 RPM	1700/650 RPM	380 RPM
Watts input on full load	260	260	260	260
Overall length	$8\frac{1}{8}$"	$8\frac{5}{8}$"	$8\frac{5}{16}$"	$9\frac{5}{16}$"
Distance from spindle to outer casing	$1\frac{1}{32}$"	$\frac{29}{32}$"	$\frac{29}{32}$"	$\frac{29}{32}$"
Nett weight	3 lbs. 13 ozs.	$4\frac{1}{4}$ lbs.	4 lbs. 10 ozs.	4 lbs. 14 ozs.

ROTARY PERCUSSION DRILLS



GXP and Double Insulated DIXP

Specifications	GXP	DIXP
Drilling capacity in steel	$\frac{5}{16}$"	$\frac{1}{2}$"
Drilling capacity in hardwood	$\frac{5}{8}$"	1"
Drilling capacity in concrete, brick, etc.	$\frac{5}{8}$"	$1\frac{3}{8}$"
Spindle speed running light	1550 RPM	650 RPM
Spindle speed on full load	850 RPM	510 RPM
Percussive frequency light load	18600 PM	7800 PM
Percussive frequency full load	40200 PM	6120 PM
Overall length	11"	$17\frac{1}{4}$"
Nett weight	7 lbs.	$12\frac{1}{2}$ lbs.
Watts input on full load	235	600
Distance from centre of spindle to outer casing	$1\frac{5}{16}$"	$1\frac{1}{4}$"

Wolf PORTABLE ELECTRIC DRILLS

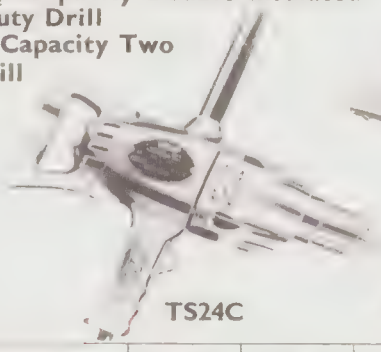
¼" Production Drill EG2C

⅜" Heavy Duty Drill WD3C

Specification	EG2C	WD2C	WD23C	WD3C	WD34C
Drilling capacity in steel	¼"	¼"	5/16"	⅜"	½"
Drilling capacity in hardwood	½"	⅝"	¾"	⅞"	1"
Spindle speed running light	2800 r.p.m.	2400 r.p.m.	1500 r.p.m.	1100 r.p.m.	550 r.p.m.
Spindle speed on full load	1500 r.p.m.	1650 r.p.m.	1100 r.p.m.	850 r.p.m.	380 r.p.m.
Watts input on full load	235 watts	475 watts	600 watts	600 watts	475 watts
Overall length	7¼"	12"	13¼"	13¾"	13¾"
Distance from the centre of spindle to outer casing	1"	1⅛"	1¾"	1¼"	1¼"
Gross weight	6 lbs.	8¾ lbs.	10 lbs.	10½ lbs.	10½ lbs.
Recommended Drill Stand Type	ES1	ES14	ES14	ES14	ES14

WD2C ¼" Heavy Duty Drill WD2C

SD4C ½" Capacity General Duty Drill
TS24C ½" Capacity Two Speed Drill
DI-X4C ½" Capacity Double Insulated Heavy Duty Drill
TS35C ⅝" Capacity Two Speed Drill



TS24C

SD4C

WD5C, WD6C, fitted with key chuck

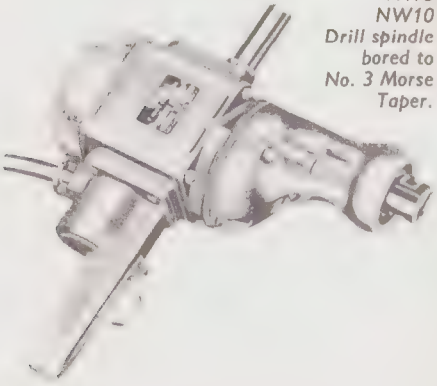
WD5, WD6, fitted with Morse Taper spindles. Illustration shows WD4R

Specification	SD4C	TS24C	DI-X4C	DI-X24C	TS35C
Drilling capacity in steel	½"	½"	½"	½"	⅝"
Drilling capacity in hardwood	1"	1"	1"	1¼"	1½"
Spindle speed running light—High	715 r.p.m.	1700 r.p.m.	650 r.p.m.	650 r.p.m.	1350 r.p.m.
Low	—	660 r.p.m.	—	1700 r.p.m.	550 r.p.m.
Spindle speed on full load — High	475 r.p.m.	1200 r.p.m.	510 r.p.m.	510 r.p.m.	970 r.p.m.
Low	—	450 r.p.m.	—	1300 r.p.m.	380 r.p.m.
Watts input on full load	435 watts	440 watts	600 watts	600 watts	600 watts
Overall length	13¾"	15⅜"	14 5/16"	15¾"	15⅜"
Distance from centre of spindle to outer casing	1 5/16"	1 5/16"	1¼"	1 5/16"	1 5/16"
Gross weight	14 lbs.	15¾ lbs.	13 lbs.	14½ lbs.	15¾ lbs.
Recom. Drill Stand Type	ES14	ES14	ES14	ES14	ES14

DI-X4 ½" Capacity Double Insulated Drill No. 1 Morse Taper Spindle
TS24 ½" Capacity Two Speed Deill No. 1 Morse Taper Spindle
TS35 ⅝" Capacity Two Speed Drill No. 2 Morse Taper Spindle

1" Heavy Duty Electric Drill NW8
1¼" Heavy Duty Electric Drill NW10

NW8
NW10
Drill spindle bored to No. 3 Morse Taper.



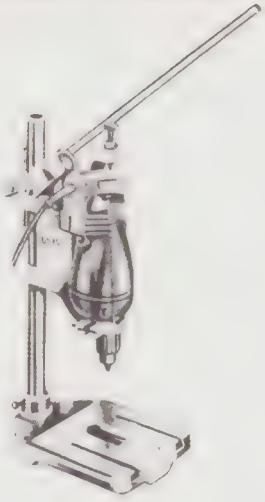
Specification	WD5, WD5C	WD6, WD6C	NW8	NW10
Drilling capacity in steel	⅝"	¾"	1"	1¼"
Drilling capacity in hardwood	1½"	2"	2½"	3"
Spindle speed running light	560 r.p.m.	440 r.p.m.	380 r.p.m.	280 r.p.m.
Spindle speed on full load	350 r.p.m.	280 r.p.m.	230 r.p.m.	180 r.p.m.
Watts input on full load	595 watts	595 watts	1250 watts	1250 watts
Overall length	13½"	14"	20"	20"
Distance from the centre of spindle to outer casing	1⅝"	1⅝"	1⅞"	1⅞"
Gross weight	23 lbs.	27½ lbs.	36 lbs.	36 lbs.
Recommended Drill Stand Type	ES23	ES23	ES2	ES2

All of these machines can be fitted with Reversing Switch Suffix "R"

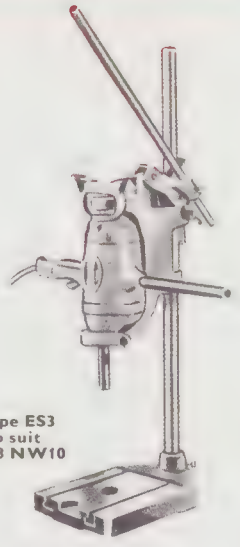
PORTABLE ELECTRIC DRILL BENCH STANDS

Type ES1
To suit EG2C

Type ES14
To suit
WD2C WD3C
SD4C TS24C
T3S5C D1X4C
D1X24C

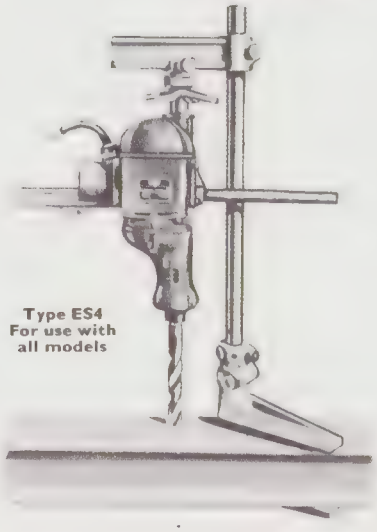


Type ES23
To suit
WD5C WD6C



Type ES3
To suit
NW8 NW10

Model	Specification			
	Depth of Feed	Overall Height	Table Area	Nett Weight
ESO	3″	22″	7″ diam.	18 lbs.
ES1	3″	22″	8″ x 8″	29 lbs.
ES14	3″	24½″	8″ x 8″	47 lbs.
ES23	4″	39″	9″ x 9″	64 lbs.
ES3	4″	39″	10″ x 10″	90 lbs.
ES4	Adjustable	40″	Girder Clamp Base	49 lbs.



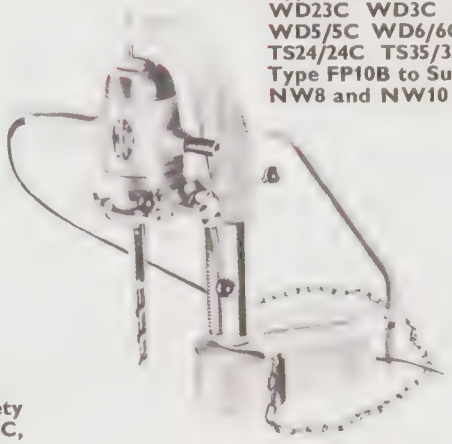
Type ES4
For use with
all models

ELECTRO-MAGNETIC DRILL STAND

TYPES FP6B, FP10B

SPECIFICATION	FP6B	FP10B
Capacity in Steel	¾″	1¼″
Depth of Feed	8¾″	8¾″
Magnetic Hold Value ¼″ Material	950 lbs.	950 lbs.
Magnetic Hold Value ¾″ Material	1750 lbs.	1750 lbs
Input to Electro Magnet	100 watts	100 watts
Maximum Distance from Chuck to Work	10½″	10½″
Maximum Angle of Swing Round Pillar	280°	280
Distance from Base to Drill Centre	3″	3″
Height	28¼″	28¼″
Weight-less Drill	53 lbs.	53 lbs.

Each Stand Supplied Complete with 20 ft. 3 Core Cable, Safety Chain, Plug Top for Electric Drill and Adaptor Ring for WD2C—34C, SD4C TS24C and TS35C



Type FP6B to suit WD2C WD23C WD3C WD34C WD5/5C WD6/6C SD4C TS24/24C TS35/35C
Type FP10B to Suit NW8 and NW10

WOLF PORTABLE ELECTRIC GRINDERS

4″ and 6″ HEAVY DUTY GRINDERS

Specification	GQ4	GQ6
Capacity Grinding Wheel Size	4″ x ¾″ x ½″	6″ x 1″ x ¾″
Wire Scratch Brush or Calico Mop Size	4″ x 1″	6″ x 1″
Spindle Speed running light	5000 r.p.m.	5600 r.p.m.
Spindle Speed on full load	3500 r.p.m.	3850 r.p.m.
Watts input on full load	775 watts	1200 watts
Overall length	21½″	25½″
Gross weight	18 lbs.	31½ lbs.

GQ4

GQ6

Vitrified and Resinbond Wheels — Page 261-262

7″ and 9″ HIGH SPEED DOUBLE INSULATED ANGLE GRINDERS

Designed to operate Raised Hub Wheels at their correct speeds and maintain these high speeds on the heaviest continuous work.

Specification	DI-J7	DI-J9
Capacity	7″ dia.	9″ dia.
Grinding Disc Thicknesses	5/32″ - 3/8″	5/32″ - 3/8″
Speed running light	8000 r.p.m.	6000 r.p.m.
Speed full load	6250 r.p.m.	4800 r.p.m.
Watts input full load	1400 watts	1400 watts
Overall length	16¾″	16¾″
Nett weight	16½ lbs.	17¼ lbs.

Thicknesses 5/32″ ¼″ and ⅜″ ¼″ thickness supplied with DI-J7 and DI-J9.

Raised Hub Wheels See Page 263

7″ ANGLE SANDER
7″ DOUBLE INSULATED SANDER
9″ DOUBLE INSULATED SANDER GRINDER

for use with Fibre backed and Raised Hub Grinding Discs and Wheels.

Specification	HS7	DI-S7	DI-GS9
Size of sanding disc	7″ dia.	7″ dia.	9″ dia.
Size of cup wire brush	5″ x ½″	5″	5″
Diameter of grinding wheel	4″ x 1½″ x ¾″	4″ x 1½″ x ¾″	4″ x 1½″ x ¾″
Size of depressed centre wheel	—	7″ x 3/16″	9″ x 3/16″
Spindle speed running light	4200 r.p.m.	4200 r.p.m.	4000 r.p.m.
Spindle speed on full load	2600 r.p.m.	3300 r.p.m.	3000 r.p.m.
Watts input on full load	775 watts	1000 watts	1400 watts
Length	17½″	16¾″	16¾″
Weight	17 lbs.	12½ lbs.	14½ lbs.

HS7

Complete details of 3M. Discs are shown on page 282.

SANDSWIFT ORBITAL SANDER OR37
SAPPHIRE ORBITAL SANDER IF49

Specification	OR37	IF49
Size of Pad	3⅜″ x 7⅛″	4½″ x 9″
Platen Orbits per Min. on Light Load	4,400	14,000
Platen Orbits per Min. on Normal Load	3,680	13,000
Diameter or Orbit	1/4″	1/8″
Watts Input on Normal Load	210 watts	360 watts
Length Overall	9″	—
Weight	7¼ lbs.	6½ lbs.

Each machine supplied with sponge Rubber Pad, 10 ft. T.R.S. Cable, hexagon key for Pad removal, 6 sheets of Aluminous Oxide Open Coat Paper.

Wolf PORTABLE ELECTRIC SAWS

SS65

RS7

DIR9

Specification	SS65	RS7	DIR9
Cutting Capacity: Max. vertical cut	$2\frac{1}{8}$″	$2\frac{5}{16}$″	$3\frac{1}{8}$″
Max. bevel cut (45)	$1\frac{3}{4}$″	2″	$2\frac{5}{16}$″
Saw Blade R.P.M.: No load	5000 r.p.m.	4200 r.p.m.	3650 r.p.m.
Full load	3600 r.p.m.	3000 r.p.m.	2850 r.p.m.
Watts input on full load	600 watts	1050 watts	1250 watts
Overall length	$10\frac{3}{8}$″	$14\frac{1}{2}$″	$15\frac{3}{4}$″
Nett Weight	9 lbs.	$17\frac{1}{4}$ lbs.	20 lbs.
Gross Weight	11 lbs.	20 lbs.	21 lbs.

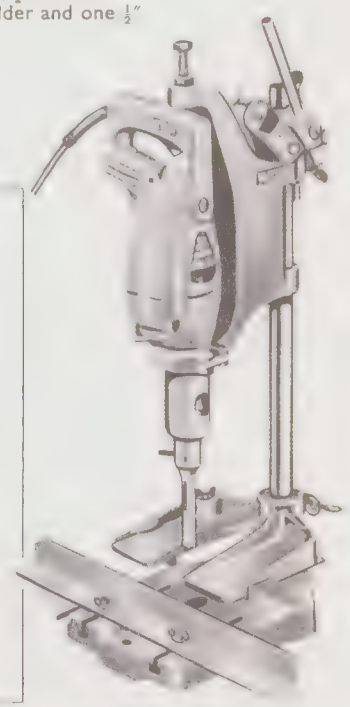
Each machine supplied complete with 10 ft. T.R.S. cable, 1 combination rip and cross-cut blade, ripping guide, tee spanner, Tommy bar.

COMBINED ELECTRIC MORTISER AND DRILL NM4

SPECIFICATION

For Mortise Slot widths	$\frac{1}{4}$″ to $\frac{1}{2}$″	Drilling Capacity in Hardwood	$\frac{3}{8}$″
Maximum depth of timber	$4\frac{1}{2}$″	Spindle Speed running light	1100 r.p.m.
Depth of feed	3″	Spindle Speed on full load	850 r.p.m.
Maximum distance from centre of bit to back stops	$3\frac{1}{8}$″	Watts input on full load	600 watts
Base Table Area	8″ x 8″	Nett Weight Drill only	$8\frac{1}{2}$ lbs.
Overall Height	$24\frac{1}{2}$″	Nett Weight complete unit	48 lbs.
Drilling Capacity in Steel	$\frac{3}{8}$″		

Each machine supplied complete with 10 ft. of 3-core, T.R.S. cable, $\frac{3}{8}$″ 3-jaw keyed chuck, guides, clamp plate, $\frac{1}{2}$″ hollow mortise chisel, bit and holder and one $\frac{1}{2}$″ sharpening tool.



PORTABLE POWER POINT

Fitted with two power outlets

TRS Cable capacity
100 yards 3 core 23/0076
90 yards 3 core 40/0076
60 yards 3 core 70/0076
Nett Weight
$9\frac{3}{4}$ lbs.

ACCESSORIES

Hollow Square Chisels

Sizes $\frac{1}{2}$″, $\frac{7}{16}$″, $\frac{3}{8}$″, $\frac{5}{16}$″, $\frac{1}{4}$″

Mortise Chisel Sharpening Tools

Sizes $\frac{1}{2}$″, $\frac{7}{16}$″, $\frac{5}{16}$″, $\frac{3}{8}$″, $\frac{1}{4}$″

Mortise Drilling Bits

Sizes $\frac{1}{2}$″, $\frac{7}{16}$″, $\frac{3}{8}$″, $\frac{5}{16}$″, $\frac{1}{4}$″

Wolf PORTABLE ELECTRIC SCREWDRIVERS

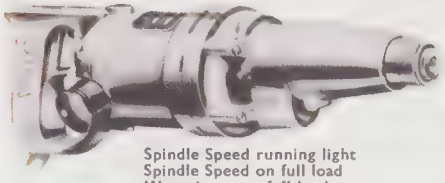
OKS LIGHTWEIGHT
DI-KS LIGHTWEIGHT

Double Insulated ☐

SPECIFICATION	OKS, DI-KS
Spindle Speed running light	1000 r.p.m.
Spindle Speed on full load	650 r.p.m.
Watts input on full load	210 watts
Overall length with Bit in position	11¾″
Distance from centre of spindle to outer casing	1⅛″
Gross Weight	6 lbs.

Each machine supplied complete with clutch adjusting key, 6 ft. of T.R.S. cable and No. 8 screwdriving bit and guide. Capacity. No. 4 to No. 12 Wood Screws.

NWSI HEAVY DUTY SCREWDRIVER
NWTI HEAVY DUTY NUT SETTER

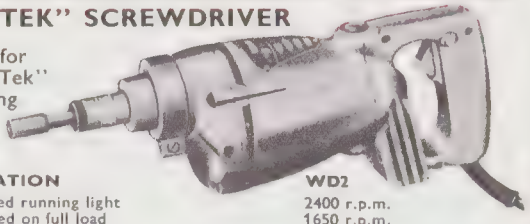


SPECIFICATION	
Spindle Speed running light	530 r.p.m.
Spindle Speed on full load	290 r.p.m.
Watts input on full load	280 watts
Overall Length with Bit in position	1 ft. 6 in.
Distance from centre of spindle to outer casing	1⅛″
Gross Weight	10¼ lbs.

Each machine supplied complete with 10 ft. of 3-core T.R.S. cable, reversing plug. The NWS1: clutch adjusting key, No. 12, screw-driving bit and guide sleeve. The NWT1: 3″ extension piece and $\frac{5}{16}$″ Whitworth hexagon socket. Capacity. No. 4 to No. 16 Wood Screws.

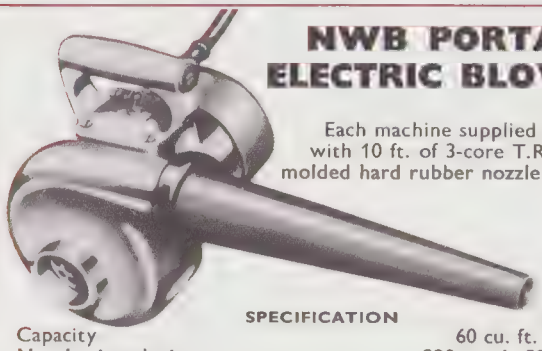
WD2 "TEK" SCREWDRIVER

Designed for Driving "Tek" Self Drilling Screws up to $\frac{5}{16}$″



SPECIFICATION	WD2
Spindle Speed running light	2400 r.p.m.
Spindle Speed on full load	1650 r.p.m.
Watts input on full load	475 watts
Overall Length with Bit in position	15″
Distance from centre of spindle to outer casing	1⅛″
Gross Weight	9 lbs.

NWB PORTABLE ELECTRIC BLOWER



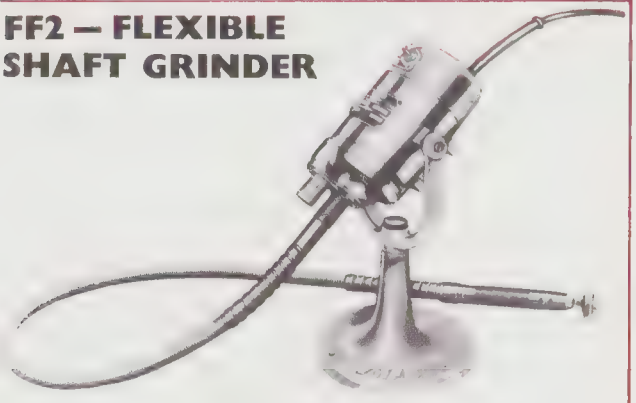
Each machine supplied complete with 10 ft. of 3-core T.R.S. cable, molded hard rubber nozzle 11″ long

SPECIFICATION	
Capacity	60 cu. ft. per min.
Nozzle air velocity	220 m.p.h. 322 ft. sec.
Watts input on full load	370 watts
Water Gauge Pressure (Water lift)	24″
Gross Weight	12½ lbs.
Gross Weight (with suction attachments)	21½ lbs.

THIS BLOWER CAN READILY BE CONVERTED FOR USE AS AN INDUSTRIAL VACUUM CLEANER — by the addition of

1. *Dust bag*
2. *Carring strap*
3. *Suction hose*
4. *Suction nozzle*

FF2 — FLEXIBLE SHAFT GRINDER



SPECIFICATION

SHAFT SPEED 1	
For Grinding and Polishing	11,500 r.p.m.
SHAFT SPEED 2	
For Rotary Files and Milling Cutters	1200 r.p.m.
Watts input on full load	370 watts
Maximum size of Grinding Wheel	2″ × ⅜″
Maximum size of Calico Mop	3″
Maximum size of Wire Scratch Brush	2¾″
Nett Weight	22 lbs.
Gross Weight	23½ lbs.

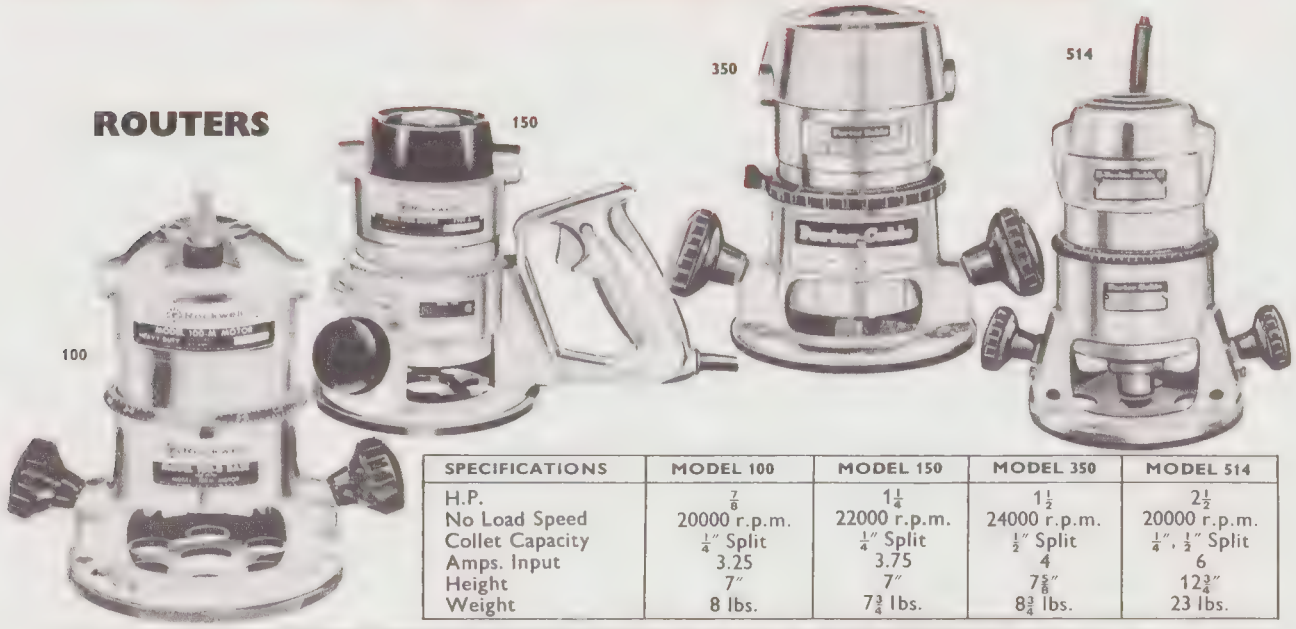
The Ball Bearing Toolholder of the Flexible Shaft, is fitted with ¼″ Collet. Supplied complete with Universal Motor (.3 h.p.) mounted on swivel base and fitted with Wolf 10FD Flexible Shaft, 4 ft. 6 in. in length, 10 ft. of 3-core T.R.S. Cable, Arbor with Washers and Nut, Grinding Wheel 2″ × ⅜″.

HEATING ATTACHMENT

LOADING	Series Connection	Independent Connection
1 K.W. Heater	200°F 35 c.f.m.	130°F 70 c.f.m.
2 KW. (Standard) Heater	300°F 35 c.f.m.	200°F 70 c.f.m.
3 K.W. Heater	460°F 35 c.f.m.	300°F 70 c.f.m.

ROCKWELL-PORTER CABLE PORTABLE ELECTRIC TOOLS

ROUTERS

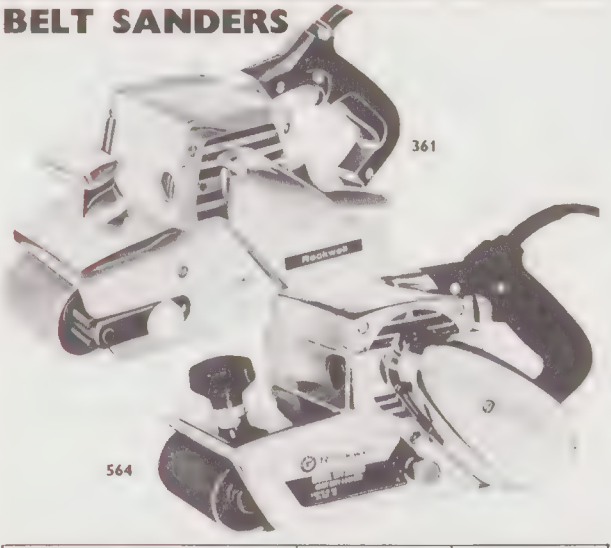


SPECIFICATIONS	MODEL 100	MODEL 150	MODEL 350	MODEL 514
H.P.	$\frac{7}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$	$2\frac{1}{2}$
No Load Speed	20000 r.p.m.	22000 r.p.m.	24000 r.p.m.	20000 r.p.m.
Collet Capacity	$\frac{1}{4}$" Split	$\frac{1}{4}$" Split	$\frac{1}{2}$" Split	$\frac{1}{4}$", $\frac{1}{2}$" Split
Amps. Input	3.25	3.75	4	6
Height	7"	7"	$7\frac{5}{8}$"	$12\frac{3}{4}$"
Weight	8 lbs.	$7\frac{3}{4}$ lbs.	$8\frac{3}{4}$ lbs.	23 lbs.

MODEL 310 LAMINATE TRIMMER

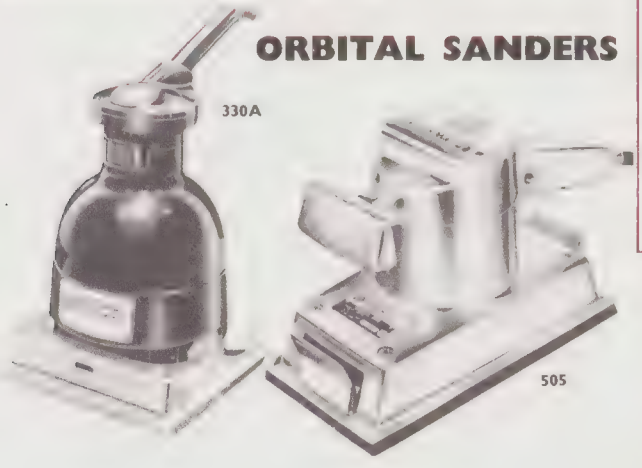
SPECIFICATION	MODEL 310
H.P.	—
No Load Speed	27,500 r.p.m.
Collett Capacity	$\frac{1}{4}$"
Amps. Input	1.9
Height	7"
Weight	$3\frac{3}{4}$ lbs.

BELT SANDERS



SPECIFICATIONS	MODEL 361	MODEL 564
No Load Speed	1550 S.F.P.M.	1500 S.F.P.M.
Belt Size	3" x 24"	4" x 24"
Amps.	5.25	4.5
Length	14"	13"
Weight	14 lbs.	14 lbs.

ORBITAL SANDERS



SPECIFICATIONS	MODEL 330A	MODEL 505
Drive	Direct	Direct
No Load Speed	12,000 O.P.M.	10000 O.P.M.
Amps.	1.0	1.5
Orbit Diameter	$\frac{5}{64}$"	$\frac{1}{6}$"
Pad Size	$4\frac{1}{8}$" x $4\frac{1}{2}$"	$4\frac{1}{2}$" x $9\frac{3}{8}$"
Weight	$3\frac{3}{4}$ lbs.	$7\frac{1}{4}$ lbs.

ROCKWELL-PORTER CABLE PORTABLE ELECTRIC TOOLS

SAWS

SPECIFICATIONS	MODEL 368	MODEL 592
No load speed	5800 r.p.m.	5250 r.p.m.
Amps.	6.25	7.0
Blade Diameter	$8\frac{1}{4}''$	$10\frac{1}{4}''$
Depth of cut	$2\frac{15}{16}''$	$3\frac{3}{4}''$
Depth of cut 45°	$2\frac{3}{8}''$	$2\frac{15}{16}''$
Length	12″	$14\frac{1}{2}''$
Weight	$13\frac{1}{2}$ lbs.	18 lbs.

TIGER SAWS

SPECIFICATIONS	MODEL 677/2 Two Speed
Action	Dual
Amps.	4.0
No load speed —High	2800
—Low	1900
Length of stroke	1″
Length overall	$17\frac{1}{2}''$
Weight	9 lbs.

DUAL ACTION, ORBITAL AND RECIPROCATING

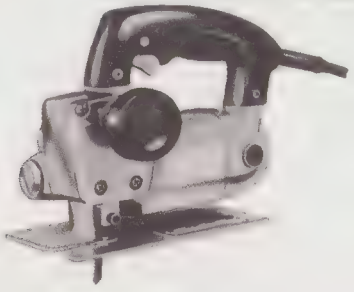
PORTABAND (PORTABLE BAND SAW)

SPECIFICATIONS	MODEL 725
Amps.	2.25/3.25
No load speed	195/245 S.F.P.M.
Capacity — Rectangular	$3\frac{3}{8}'' \times 4\frac{1}{8}''$
Capacity — Round	$3\frac{3}{8}''$
Blade Length	$44\frac{7}{8}''$
Length Overall	$19\frac{1}{2}''$
Weight	17 lbs.

MODEL 725 TWO SPEED PORTABLE BAND SAW

JIGSAW — ORBITAL ACTION

SPECIFICATIONS	MODEL 548
Amps.	1.75
Action	Orbital
No Load Speed	4500 S.P.M.
Length of Stroke	$\frac{7}{16}''$
Cutting Capacity Wood	2″
Cutting Capacity Aluminium	$\frac{3}{4}''$
Cutting Capacity Steel	$\frac{1}{4}''$
Length Overall	$7\frac{1}{8}''$
Weight	6 lbs.



POWER BLOCK PLANE

SPECIFICATIONS	MODEL 167A
No load speed	21000 r.p.m.
Amps.	1.25
Length Overall	$7\frac{1}{4}''$
Weight	$3\frac{3}{4}$ lbs.
Maximum depth of cut	$\frac{1}{64}''$

BLACK & DECKER ELECTRIC TOOLS

SINGLE SPEED HOLGUN—$\frac{1}{4}$″ CAPACITY

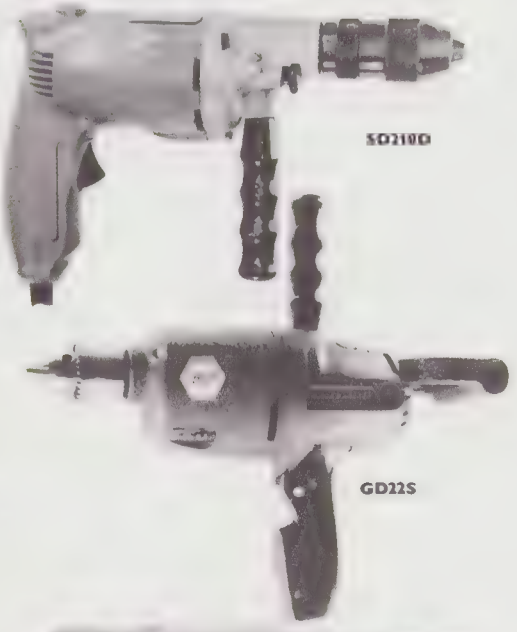
SPECIFICATIONS	HD345	SD457	SD457/2	SD457/3	SD460
Drilling Capacity Steel	$\frac{1}{4}$″	$\frac{1}{4}$″	$\frac{1}{4}$″	$\frac{1}{4}$″	$\frac{1}{4}$″
Hardwood	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{1}{2}$″
Holesaws	1″	1″	1″	1″	1″
Spindle Speed Running Light	1700 r.p.m.	1700 r.p.m.	2500 r.p.m.	3500 r.p.m.	600 r.p.m.
Weight	$3\frac{1}{4}$ lbs.	$3\frac{1}{4}$ lbs.	$3\frac{1}{4}$ lbs.	$3\frac{1}{4}$ lbs.	$3\frac{1}{2}$ lbs.
Overall Length	8″	$7\frac{1}{4}$″	$7\frac{1}{4}$″	$7\frac{1}{4}$″	$7\frac{5}{8}$″

HEAVY DUTY PISTOL GRIP DRILLS—$\frac{1}{4}$″ $\frac{5}{16}$″ & $\frac{3}{8}$″

SPECIFICATIONS	SD32	SD360	HD490
Drilling Capacity Steel	$\frac{1}{4}$″	$\frac{5}{16}$″	$\frac{3}{8}$″
Hardwood	$\frac{1}{2}$″	$\frac{5}{8}$″	$\frac{3}{4}$″
Holesaws	1″	$1\frac{1}{8}$″	$1\frac{1}{2}$″
Spindle Speed Running Light	2000 r.p.m.	1400 r.p.m.	900 r.p.m.
Weight	$6\frac{3}{4}$lbs.	7 lbs.	$7\frac{1}{4}$ lbs.
Overall Length	$12\frac{1}{4}$″	$12\frac{3}{8}$″	$12\frac{1}{2}$″

TWO SPEED DRILLS—$\frac{3}{8}$″ & $\frac{1}{2}$″ CAPACITY

SPECIFICATIONS	HD345/2S	SD210D	GD22S
Drilling Capacity Steel	$\frac{3}{8}$″	$\frac{3}{8}$″	$\frac{1}{2}$″
Hardwood	$\frac{3}{4}$″	$\frac{3}{4}$″	1″
Holesaws	$1\frac{1}{2}$″	$1\frac{1}{2}$″	$2\frac{5}{8}$″
Spindle Speed Running Light Low	900 r.p.m.	1000 r.p.m.	600 r.p.m.
High	2400 r.p.m.	1600 r.p.m.	2000 r.p.m.
Weight	$4\frac{1}{2}$ lbs.	$5\frac{1}{4}$ lbs.	9 lbs.
Overall Length	$9\frac{1}{2}$″	10″	15″



SUPER DUTY DRILLS—$\frac{3}{8}$″ & $\frac{1}{2}$″ CAPACITY

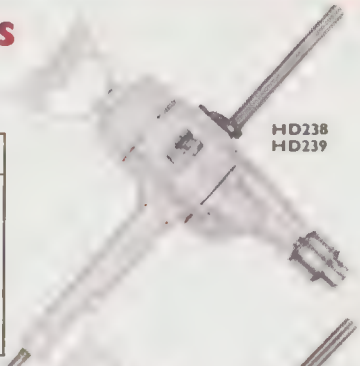
SPECIFICATIONS	SD362	HD687†	HD361	SD40	SD215D
Drilling Capacity Steel	$\frac{3}{8}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{1}{2}$″
Hardwood	$\frac{3}{4}$″	1″	1″	1″	$1\frac{1}{4}$″
Holesaws	$1\frac{1}{2}$″	$2\frac{5}{8}$″	$3\frac{1}{2}$″	$3\frac{1}{2}$″	3″
Spindle Speed Running Light	900 r.p.m.	600 r.p.m.	400 r.p.m.	500 r.p.m.	600/970 r.p.m.
Weight	$10\frac{1}{2}$ lbs.	$7\frac{1}{2}$ lbs.	$10\frac{3}{4}$ lbs.	17 lbs.	10 lbs.
Overall Length	$13\frac{1}{2}$″	$13\frac{1}{4}$″	$13\frac{3}{4}$″	$18\frac{1}{2}$″	$14\frac{3}{8}$″

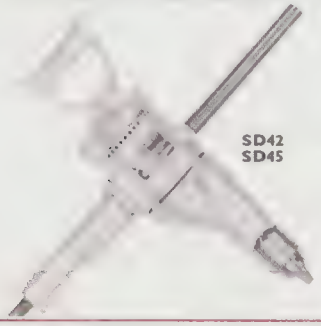
†*HD687 Reversible*

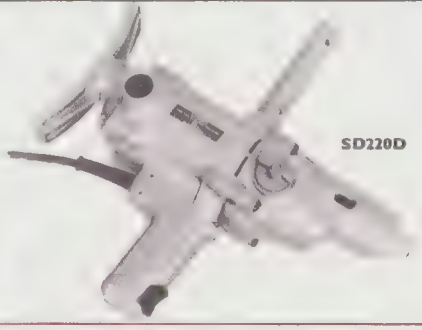
BLACK & DECKER PORTABLE ELECTRIC TOOLS

HEAVY DUTY INDUSTRIAL DRILLS

SPECIFICATIONS	HD238	SD42	HD239	SD45	SD220D	SD47/2
Drilling Capacity Steel	$\frac{5}{8}$″	$\frac{5}{8}$″	$\frac{3}{4}$″	$\frac{3}{4}$″	$\frac{7}{8}$″	$1\frac{1}{4}$″
Hardwood	$1\frac{1}{4}$″	$1\frac{1}{4}$″	$1\frac{1}{2}$″	$1\frac{1}{2}$″	$1\frac{5}{8}$″	
Holesaws	4″	4″	4″	4″	4″	
Spindle Speed running Light	300 r.p.m.	450 r.p.m.	250 r.p.m.	375 r.p.m.	300 /490 r.p.m.	275 r.p.m.
Weight	17 lbs.	$27\frac{1}{4}$ lbs.	$19\frac{1}{4}$ lbs.	$27\frac{1}{4}$ lbs.	$11\frac{1}{4}$ lbs.	$28\frac{1}{4}$ lbs.
Overall Length	18″	20″	$18\frac{3}{4}$″	21″	$15\frac{1}{2}$″	20″


HD238
HD239


SD42
SD45


SD220D

SD47/2

VERTICAL DRILL STANDS

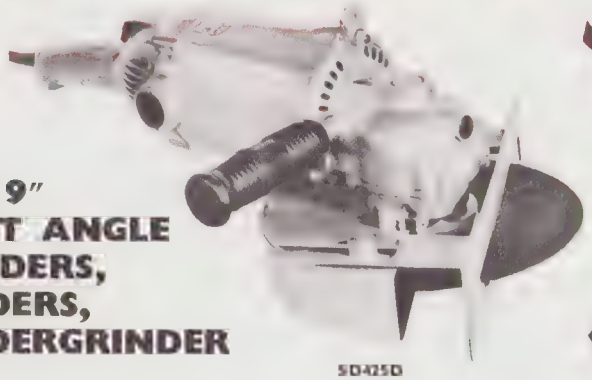
Model	Maximum Feed	Distance from Centre to Column	For use with	
119	2″	$5\frac{1}{4}$″	HD345 Holgun SD457 Holgun SD457/2 Holgun SD457/3 Holgun SD460 Holgun SD32 Drill	SD360 Drill SD210D Drill HD345/2S Holgun HD490 Drill HD681 Screwdriver $\frac{1}{4}$″ Tapper
122	4″	6″	SD362 Drill HD361 Drill HD687 Drill	GD225
125	4″	8″	SD40 Drill HD238 Drill SD42 Drill HD239 Drill	SD45 Drill SD47/2 Drill SD220D Drill (use adaptor No. 962882)

5″ & 6″ HEAVY DUTY GRINDERS

SPECIFICATIONS	HD60	HD60A	SD61	SD61A
Maximum Grinding Wheel Size	5″ × $\frac{3}{4}$″ × $\frac{1}{2}$″	5″ × $\frac{3}{4}$″ × $\frac{1}{2}$″	6″ × 1″ × $\frac{5}{8}$″	6″ × 1″ × $\frac{5}{8}$″
Spindle Speed Running Light	4500 r.p.m.	6200 r.p.m.	3750 r.p.m.	5200 r.p.m.
Weight	13 lb.	13 lb.	18 lb.	18 lb.
Overall Length	$22\frac{1}{2}$″	$22\frac{1}{2}$″	$24\frac{1}{2}$″	$24\frac{1}{2}$″

BLACK & DECKER PORTABLE ELECTRIC TOOLS

7″ & 9″ RIGHT ANGLE GRINDERS, SANDERS, SANDERGRINDER



SD425D

SD420D

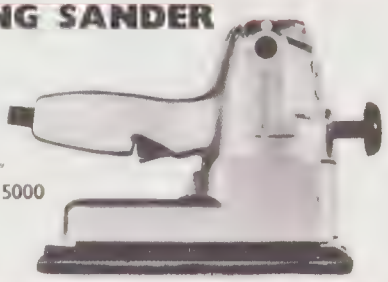
HD590A

Model	Double Insulated	Diameter of Grinding Disc.	Spindle Speed Running Light	Weight
SD425D		9″	6000 r.p.m.	17 lbs.
HD435D		9″	6000 r.p.m.	12 lbs.
SD420D		7″	8000 r.p.m.	17 lbs.
HD445D		7″	8000 r.p.m.	11½ lbs.
SD590		9″	5200 r.p.m.	14 lbs.
SD591		9″	6000 r.p.m.	14 lbs.
HD590A		7″ Rubber Pad	4200 r.p.m.	14 lbs.
SD99		7″ Rubber Pad	2150 r.p.m.	11½ lbs.
SD610D		7″ Rubber Pad	1800 r.p.m.	12 lbs.

3″ BELT SANDERS

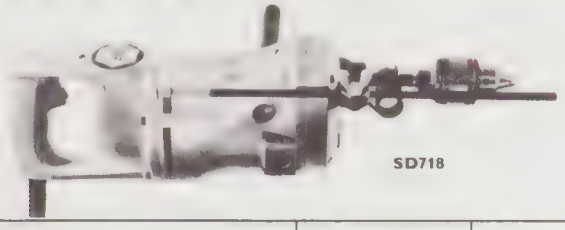
SPECIFICATION	SD838	SD839
Belt size	3″ x 24″	3″ x 24″
Belt Speed	1500 ft./min.	1500 ft./min.
Width Overall	4½″	5¼″
Length Overall	15″	15″ + bag
Weight	11¾ lbs.	14½ lbs.

FINISHING SANDER HD88

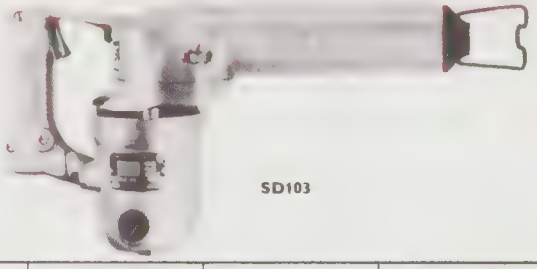


Pad size 4½″ x 9″
Orbits per Min. 5000
Weight 8½ lbs.

SUPER DUTY HAMMERS



SD718



SD103

SPECIFICATION	SD718	SD719	SD103	SD104	SD109
Operating Range					
Star Drills	1½″	1½″	¾″	1⅛″	2½″
Carbide Core Bits	2″	6″	–	–	–
Blows per Minute	3350	3600	2300	2300	1750
No. Load Speed	700 r.p.m.	485 r.p.m.	–	–	–
Weight	13 lbs.	19½ lbs.	10¾ lbs.	22 lbs.	31 lbs.

BLACK & DECKER PORTABLE ELECTRIC TOOLS

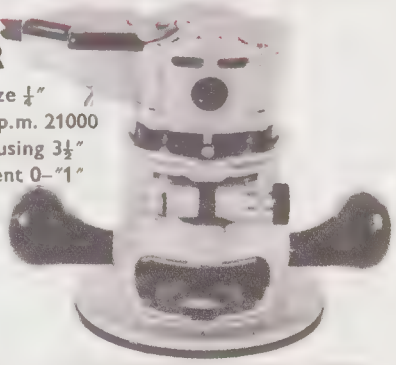
CIRCULAR SAWS

SPECIFICATION	HD62	HD70	HD80	SD999	SD925D
Blade Diameter	6⅛″	7¼″	8¼″	9¼″	9¼″
Maximum Vertical Cut	2″	2 5/16″	2 13/16″	3¼″	3¼″
Maximum Bevel Cut 45°	1⅝″	1¾″	2 1/16″	2⅜″	2⅜″
Blade Speed running light	5500 r.p.m.	4200 r.p.m.	4500 r.p.m.	3900 r.p.m.	3000 r.p.m.
Overall Length	12 5/16″	12 3/16″	14⅛″	14½″	14½″
Weight	10½ lb.	11½ lb.	14½ lb.	15¾ lb.	16½ lb.

JIGSAW SDII9D

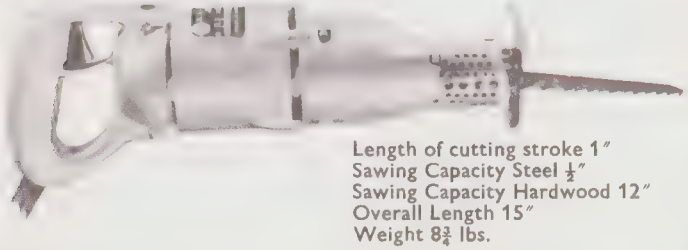
Cutting Capacity in Softwood 2″
Cutting Capacity in Hardwood 1″
Speed Strokes per Min. 2600.
Weight 5 lbs.

HDI4/3 ROUTER



Collet Chuck Size ¼″
Spindle Speed r.p.m. 21000
Diameter of Housing 3½″
Depth Adjustment 0–1″
Weight 7¼ lb.

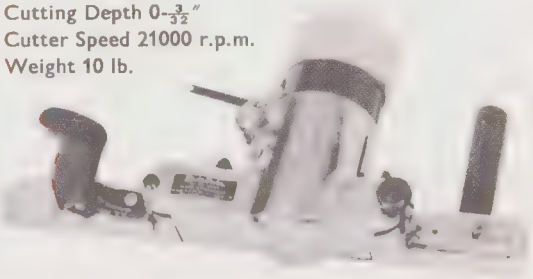
SABRE SAW SD682/6



Length of cutting stroke 1″
Sawing Capacity Steel ½″
Sawing Capacity Hardwood 12″
Overall Length 15″
Weight 8¾ lbs.

POWER PLANE HDI9

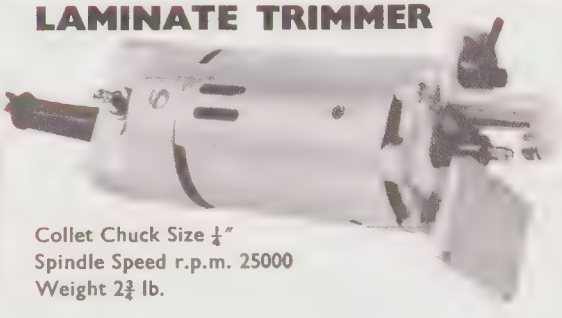
Cutter Length 2 1/16″
Cutting Depth 0–3/32″
Cutter Speed 21000 r.p.m.
Weight 10 lb.



VENEER TRIMMER HD28

Collet Chuck Size ¼″
Spindle Speed r.p.m. 21000
Diameter of Housing 3½″
Depth Adjustment 0″–1″
Weight 7¼ lb.

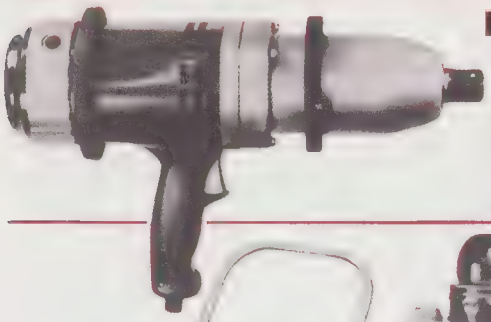
LAMINATE TRIMMER



Collet Chuck Size ¼″
Spindle Speed r.p.m. 25000
Weight 2¾ lb.

BLACK & DECKER PORTABLE ELECTRIC TOOLS

IMPACT WRENCHES



SPECIFICATION	SD724	SD625
Maximum Screw Size	$\frac{1}{2}$″	1″
Drive Square	$\frac{1}{2}$″	$\frac{3}{4}$″
Spindle Taps per min.	1800	1700
Length	$11\frac{1}{2}$″	$14\frac{1}{2}$″
Weight	7 lb.	$12\frac{3}{4}$ lb.

SD160/4

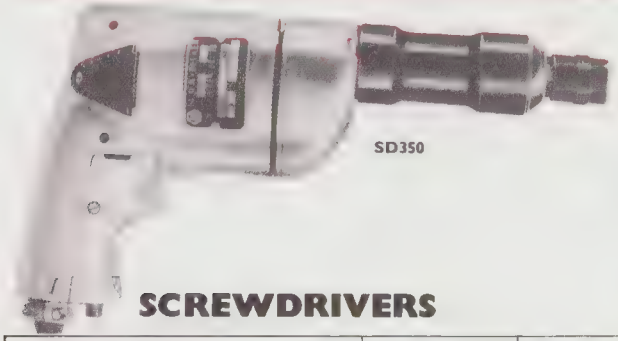
HD35

SHEAR SD9089

Capacity 14 S.W.G.
Speed 2500 strokes per min.
Min. Cutting Radius $\frac{3}{4}$″
Weight 8 lb.

INDUSTRIAL VACUUM CLEANERS

SPECIFICATIONS	HD35	HD77	SD160/1	SD160/2	SD160/3	SD160/4
Recoverable Capacity, Imp. Gals.	7	11	7	11	7	11
Tank	Steel	Steel	Steel	Steel	Stainless Steel	Stainless Steel
Horse Power	$1\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$	$2\frac{1}{4}$
Inlet Diameter	2″	2″	2″	2″	2″	2″
Maximum Air Flow	84 C.F.M.	140 C.F.M.	140 C.F.M.	140 C.F.M.	140 C.F.M.	140 C.F.M.
Height	$34\frac{1}{2}$″	35″	34″	38″	34″	38″
Width	$18\frac{1}{4}$″	$18\frac{1}{4}$″	$18\frac{1}{4}$″	$18\frac{1}{4}$″	$18\frac{1}{4}$″	$18\frac{1}{4}$″
Weight	43 lb.	48 lb.	51 lb.	54 lb.	52 lb.	55 lb.



SD350

HD740/2

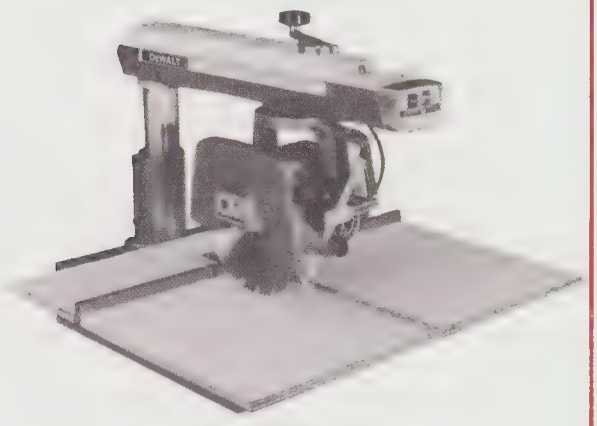
SCREWDRIVERS

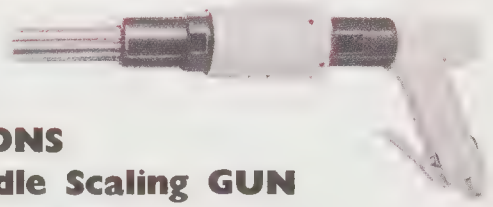
SPECIFICATIONS	SD402	SD350	HD686	HD740/2	HD681
Capacity, Wood Screws	2″ x 12g.	2″ x 12g.	$1\frac{5}{8}$ Steel Studding	$1\frac{5}{8}$ Steel Studding	$1\frac{1}{2}$″ x 10g.
Capacity, Self Tapping Screws	$\frac{1}{4}$″	$\frac{1}{4}$″	$1\frac{1}{4}$ Wood Studding	$1\frac{1}{4}$ Wood Studding	No. 12
Capacity, Machine Screws	$\frac{1}{4}$″	$\frac{1}{4}$″			Drilling $\frac{1}{4}$″
Spindle Speed Running Light	600 r.p.m.	600 r.p.m.	2000 r.p.m.	2500 r.p.m.	1000 r.p.m.
Weight	$3\frac{3}{4}$ lb.	4 lb.	4 lb.	4 lb.	4 lb.
Overall Length	9″	$10\frac{3}{4}$″	$10\frac{3}{8}$″	$11\frac{3}{8}$″	9″

DeWALT RADIAL ARM SAWS

9¼″ Radial Arm Saw — Power Shop

Specifications	Model 1125	Model 1250	Model 1450	Model 1511	Model 1513
Motor Rating	1¼ h.p.	1½ h.p.	2 h.p.	3 h.p.	3 h.p.
Power Supply	1 Ph.	1 Ph.	1 Ph.	1 Ph.	3 Ph.
Spindle Speed R.P.M.	3,000	2,850	2,850	2,850	2,850
Blade Diameter	9¼″	10″	10″	12″	12″
Spindle Diameter	⅝″	⅝″	⅝″	⅝″	⅝″
Maximum Depth of Cut	2⅝″	3″	3″	4″	4″
Maximum Cross Cut 1″ Stock	12¼″	14½″	14½″	16″	16″
Dado Width	⅞″	⅞″	⅞″	⅞″	⅞″
Ripping Width	24⅛″	24⅞″	24⅞″	26″	26″
Work Table Size	26½″ x 32″	26⅞″ x 32″	26⅞″ x 32″	27⅞″ x 34½″	27⅞″ x 34½″

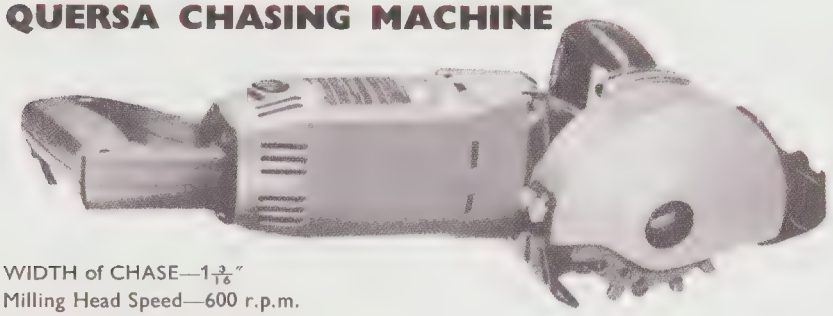


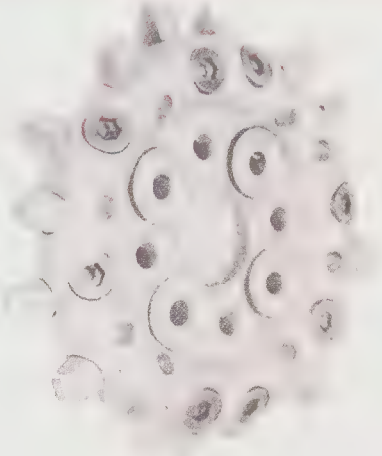


JASONS
Needle Scaling GUN

Specifications	1B	3B	4B
Length	14″	18″	20″
Weight	4 lb.	9½ lb.	13 lb.
Air Inlet B.S.P.	⅜″	⅜″	⅜″
Hose Size	⅜″	⅜″	⅜″
Blows per Min.	24,000	24,000	24,000
Air Pressure Required	85 lbs./M	85 lbs./M	85 lbs./M
Air Consumption	3.53 cfm.	7 cfm.	12 cfm.

QUERSA CHASING MACHINE





WIDTH of CHASE—1 3/16″
Milling Head Speed—600 r.p.m.
Power Rating—1 h.p.
Depth of Chase—Adjustable up to 1″ Conduit
Weight—21 lbs.

Accessories Available:
Boring Head for 3¼″ diam. junctions
Masonry Drills—¾″ and 1″ diameter

BOSCH PORTABLE ELECTRIC DRILLS

SUPER COMPACT SERIES—SINGLE SPEED

SPECIFICATION	1106	1107	1112	1110
Drilling capacity in Steel	1/4"	5/16"	3/8"	1/2"
Drilling Capacity in Aluminium	3/8"	1/2"	9/16"	3/4"
Drilling Capacity in Hardwood	5/8"	3/4"	1"	1 1/4"
Spindle Speed on full load	1100 r.p.m.	850 r.p.m.	570 r.p.m.	420 r.p.m.
Watts input on full load	215 watts	230 watts	320 watts	360 watts
Weight	2 1/2 lb.	2 3/4 lb.	3 3/4 lb.	4 lb.

SUPER COMPACT SERIES—DUAL SPEED

SPECIFICATION		1108	1113	1111
Drilling Capacity in Steel—Low speed		5/16"	3/8"	1/2"
	High speed	3/16"	1/4"	5/16"
Drilling Capacity in Aluminium—Low speed		1/2"	9/16"	3/4"
	High speed	3/8"	7/16"	1/2"
Drilling Capacity in Hardwood—Low speed		3/4"	1"	1 1/4"
	High speed	5/8"	9/16"	3/4"
Spindle speed on full load—Low speed		850 r.p.m.	570 r.p.m.	420 r.p.m.
	High speed	1500 r.p.m.	1420 r.p.m.	1000 r.p.m.
Watts Input on full load		230 watts	320 watts	360 watts
Weight		3 lb.	4 lb.	4 1/4 lb.

UNIVERSAL IMPACT DRILLS

SPECIFICATION	1171	1170	8170
Drilling Capacity in Steel	1/4"	5/8"	3/8"
Drilling Capacity in Hardwood	3/4"	2"	1"
Drilling Capacity in Stone	1/2"	1 3/16"	5/8"
Spindle Speed on full load—			
High speed	—	420 r.p.m.	—
Low speed	1200 r.p.m.	780 r.p.m.	700 r.p.m.
Watts input on full load	230 watts	450 watts	280 watts
Weight	3 3/4 lb.	11 1/2 lb.	6 1/4 lb.

UNIVERSAL DRILLS 601 SERIES

SPECIFICATION	1101	1102	1103
Drilling Capacity in Steel—Low speed		5/8"	7/8"
High speed	1/2"	5/16"	1/2"
Spindle Speed on full load—Low speed	—	370 r.p.m.	250 r.p.m.
High speed	500 r.p.m.	1170 r.p.m.	600 r.p.m.
Watts input on full load	450 watts	450 watts	600 watts
Weight	6 1/2 lb.	7 3/4 lb.	10 lb.

COMBI DRILLS

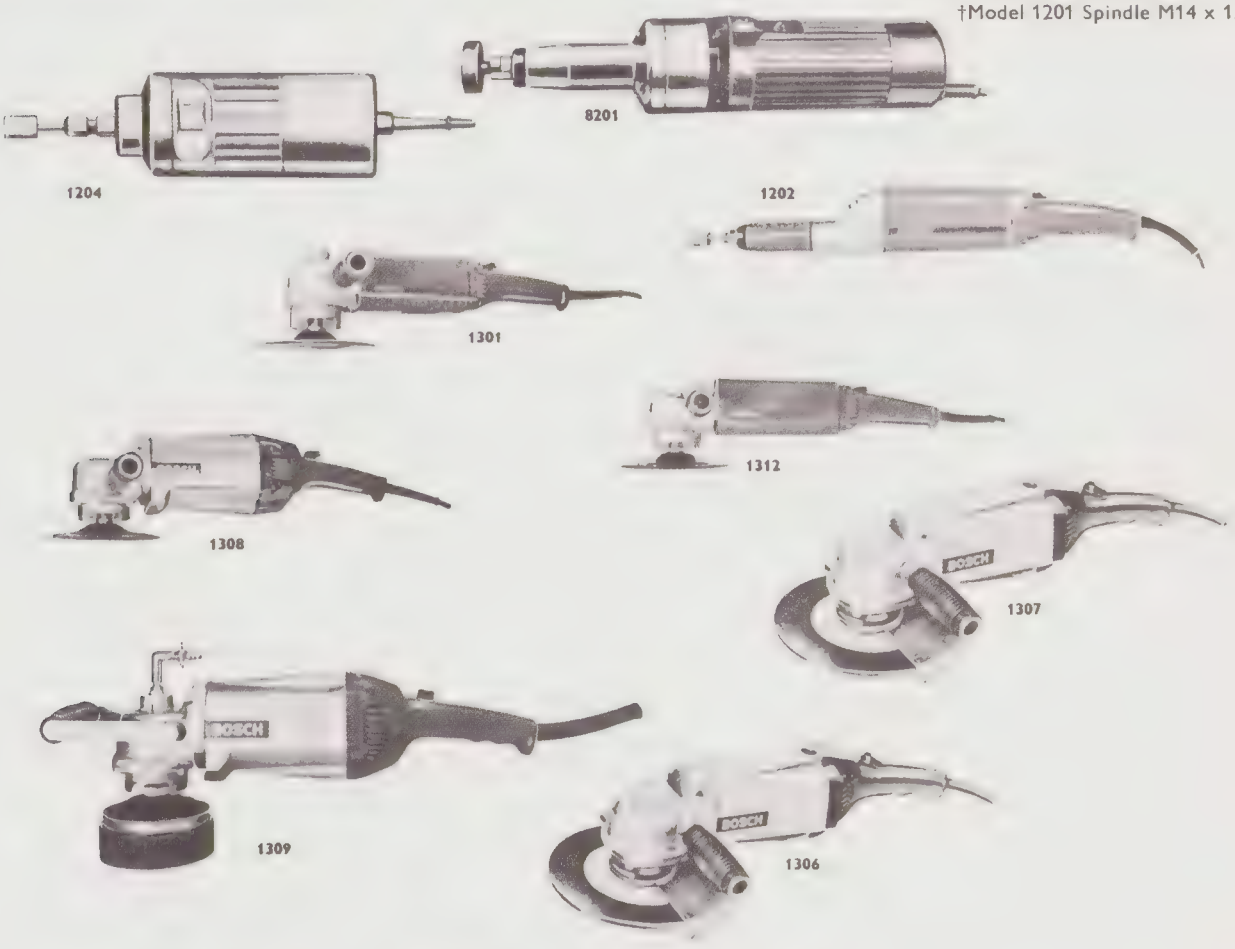
SPECIFICATION	5/16"	3/8"
Drilling Capacity in Steel	1/4"	3/8"
Drilling Capacity in Aluminium	3/8"	5/8"
Drilling Capacity in Hardwood	3/4"	1"
Chuck Capacity (Round Shank)	5/16"	3/8"
Spindle Speed — no load or Running Light r.p.m.	1750	3000/900
Watts input on full load	280	310
Weight	4 lb.	4 1/2 lb.

BOSCH AND LESTO INDUSTRIAL GRINDERS

STRAIGHT GRINDERS

SPECIFICATIONS	1204	8201	1202
Spindle Speed—No load	25000 r.p.m.	25000 r.p.m.	9000 r.p.m.
Collet Capacity	$\frac{1}{4}$" Collet	$\frac{1}{4}$" Collet	$\frac{5}{16}$" †
Watts Input—full load	250 watts	280 watts	600 watts
Length Overall	$8\frac{1}{4}$"	$13\frac{1}{2}$"	$20\frac{5}{8}$"
Weight	$2\frac{1}{2}$ lb.	$5\frac{1}{4}$ lb.	9 lb.

†Model 1201 Spindle M14 x 1.5.



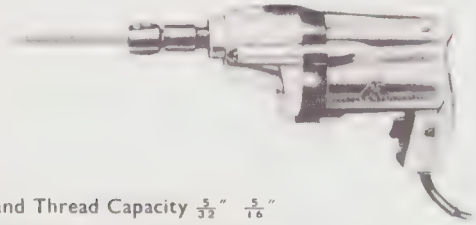
ANGLE GRINDERS, SANDERS AND POLISHERS

Model	Spindle Size	Spindle Speed	Watts Input	Weight	Application
1301	M14	1950 r.p.m.	600 watts	$8\frac{1}{2}$ lb.	Wet Grinding
1312	M14	4000 r.p.m.	1200 watts	$10\frac{1}{2}$ lb.	Angle Sander Grinder
1309	M20	2000 r.p.m.	1400 watts	$13\frac{1}{4}$ lb.	Wet Grinding
1306	M14	8500 r.p.m.	1800 watts	13 lb.	7" Angle Grinding
1307	M14	6500 r.p.m.	1800 watts	13 lb.	9" Angle Grinding
1308	M14	4000 r.p.m.	1400 watts	13 lb.	Angle Sander Grinder

REVERSIBLE SCREWDRIVERS

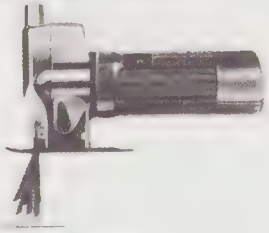
SPECIFICATION	1402	8402
Screw Capacity	up to $\frac{1}{4}$″	$\frac{5}{32}$″– $\frac{5}{16}$″
Spindle Speed	800 r.p.m.	500 r.p.m.
Watts Input full load	190 watts	280 watts
Weight	$3\frac{1}{2}$ lb.	$5\frac{1}{2}$ lb.

TAPPER AND STAYBOLT DRIVER MODEL 8460



Right hand Thread Capacity $\frac{5}{32}$″ $\frac{5}{16}$″
Spindle Speed r.p.m.—forward 300, reverse 540
Watts Input full load 280 watts
Weight $6\frac{1}{4}$ lb.

JIGSAW MODEL 8554



SPECIFICATION	8554
Adjustable Orbital Action—	Reciprocating
No load speed	3000 s.p.m.
Length of Stroke	1″
Cutting Capacity Wood	$2\frac{3}{8}$″
Cutting Capacity Aluminium	$\frac{3}{4}$″
Cutting Capacity Steel	$\frac{1}{4}$″
Watts Input full load	310 watts
Weight	$5\frac{3}{4}$ lb.

FOAM RUBBER SAW MODEL 1575

No load speed 3400 s.p.m.
Cutting Capacity up to $11\frac{3}{4}$″
Watts Input full load 220 watts
Weight $3\frac{1}{2}$ lb.

SHEARS AND NIBBLER

SPECIFICATIONS	1500 Shear	8504 Shear	8501 Nibbler
Capacity (Mild Steel)	16 S.W.G.	14 S.W.G.	15 S.W.G.
No. Load Speed	5000 S.P.M.	1800 S.P.M.	1800 S.P.M.
Watts Input full load	220 watts	280 watts	280 watts
Weight	3 lb.	$6\frac{3}{4}$ lb.	$5\frac{3}{4}$ lb.

BUILDER'S HAMMER

SPECIFICATIONS	Model 11301	Rotary Model 11201
Single Stroke Force	10 ft. lb.	
Strokes per minute	1400	300/2600 r.p.m.
Watts Input full load	700 watts	700 watts
Weight	24 lb.	$13\frac{1}{2}$ lb.
Capacity		$2\frac{5}{8}$″ diameter

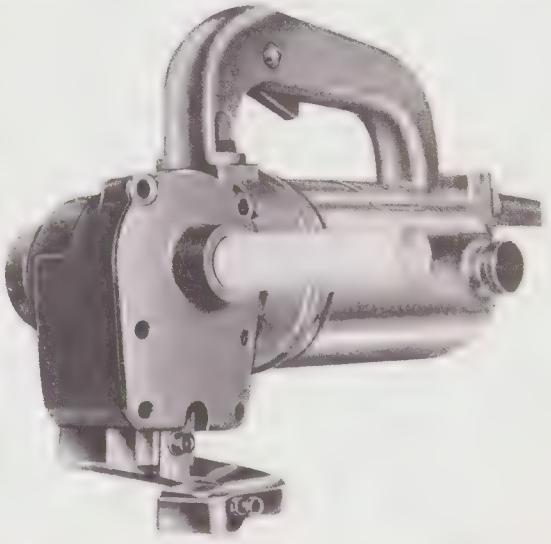
DUPLEX SHEARS AND NIBBLERS

STANDARD SHEARS

SPECIFICATIONS	G2	G3	G10	G16
Capacity in Mild Steel S.W.G.	16	14	10	7
Capacity in Stainless Steel S.W.G.	18	16	14	10
Approximate Cutting Speed f.p.m.	15–20	15–20	10–15	10
Cuts per minutes	1750	1700	1600	1300
Watts Input full load	350 watts	600 watts	800 watts	1250 watts
Weight	6½ lb.	9½ lb.	14½ lb.	27 lb.

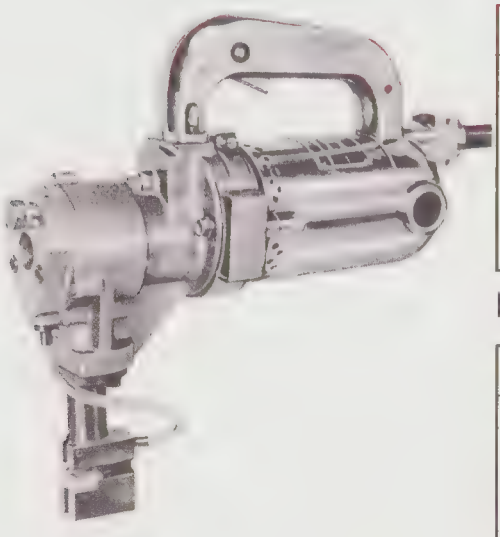
SHEARS WITH SELF FEEDING ACTION

SPECIFICATIONS	GS10	GS18
Capacity in Mild Steel	10 S.W.G.	7 S.W.G.
Approximate Cutting Speed f.p.m.	10–15	10–15
Cuts per min.	1600	1500
Watts Input full load	800 watts	2500 watts
Weight	18 lb.	24 lb.



BENCH SHEARS—*Single Phase or Three Phase*

SPECIFICATIONS	B12	B15
Capacity in Mild Steel	12 S.W.G.	9 S.W.G.
Capacity in Stainless Steel	14 S.W.G.	12 S.W.G.
Approximate Cutting Speed f.p.m.	18	16
Cuts per min.	1700	1600
Motor h.p. rating	.75	1.25
Weight	102 lb.	120 lb.



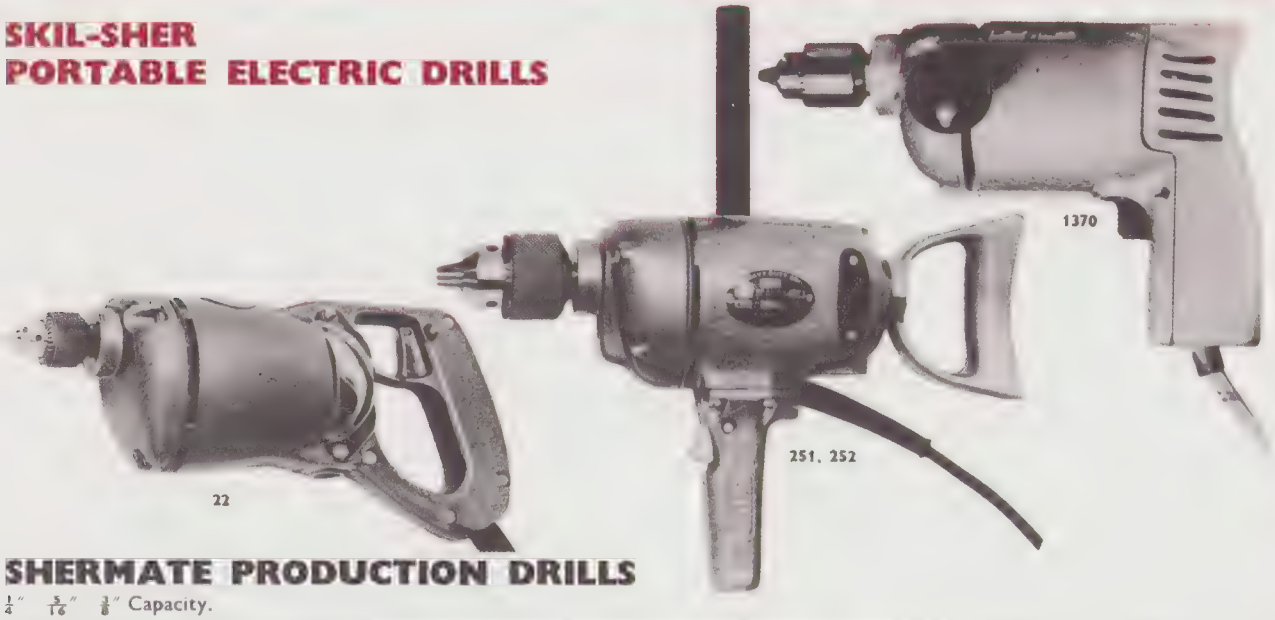
STANDARD NIBBLERS

SPECIFICATIONS	N3	N10	N16
Capacity in Mild Steel S.W.G.	14	10	7
Capacity in Stainless Steel S.W.G.	16	14	10
Anvil Entry Hole	1⅛″	1⅜″	2″
Approximate Cutting Speed f.p.m.	5–6	4–5	3–4
Minimum inside radius of cut.	1″	1½″	2″
Watts Input full load	600 watts	800 watts	1600 watts
Weight	10 lb.	16½ lb.	34 lb.

HIGH SPEED NIBBLERS

SPECIFICATIONS	N18	N12	N20
Capacity in Mild Steel S.W.G.	7	3/16″	¼″
Capacity in Stainless Steel S.W.G.	10	⅛″	3/16″
Anvil Entry Hole	2″	2″	3½″
Approximate Cutting Speed f.p.m.	5	6½	5
Minimum inside radius of cut	2½″	10″	12″
Watts Input full load	2500 watts	1600 watts	2500 watts
Weight	23 lb.	16 lb.	23 lb.

SKIL-SHER PORTABLE ELECTRIC DRILLS



SHERMATE PRODUCTION DRILLS

$\frac{1}{4}$″ $\frac{5}{16}$″ $\frac{3}{8}$″ Capacity.

CATALOGUE NUMBER	1370	1371	1372	1373	1374
Drilling Capacity Steel	$\frac{1}{4}$″	$\frac{1}{4}$″	$\frac{5}{16}$″	$\frac{3}{8}$″	$\frac{3}{8}$″
Spindle Speed Running Light	2800 r.p.m.	2000 r.p.m.	1800 r.p.m.	900 r.p.m.	900/2000 r.p.m.
Weight lbs.	$5\frac{1}{4}$	$5\frac{1}{4}$	$5\frac{1}{4}$	5 lb. 10 oz.	6
Vertical Drill Stand	SM	SM	SM	SM	2SM

INDUSTRIAL HEAVY DUTY DRILLS

$\frac{1}{4}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{3}{4}$″ Capacity.

CATALOGUE NUMBER	22	23	26	47	40
Spindle Speed Running Light	2000 r.p.m.	900 r.p.m.	750 r.p.m.	(Low) 750 r.p.m. (High) 2000 r.p.m.	340 r.p.m.
Drilling Capacity Steel	$\frac{1}{4}$″	$\frac{3}{8}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{3}{4}$″
Drilling Capacity Hardwood	$\frac{3}{4}$″	$\frac{3}{4}$″	1″	1″	$1\frac{1}{2}$″
Watts Input full load	550 watts	550 watts	550 watts	550 watts	950 watts
Weight lbs.	$6\frac{3}{4}$ lb.	$8\frac{3}{4}$ lb.	9 lb.	9 lb.	$25\frac{1}{4}$ lb.
Length	$11\frac{1}{2}$″	13″	$13\frac{1}{4}$″		19″
Vertical Drill Stand	S	S	S	2S	G

INDUSTRIAL SUPER DUTY

$\frac{1}{2}$″ $\frac{5}{8}$″ 1″ $1\frac{1}{4}$″ Capacity.

CATALOGUE NUMBER	251	252	842	487	71
Spindle Speed Running Light	450 r.p.m.	350 r.p.m.	(Low)370 r.p.m. (High)750 r.p.m.	320 r.p.m.	270 r.p.m.
Drilling Capacity Steel	$\frac{1}{2}$″	$\frac{5}{8}$″	$\frac{5}{8}$″	1″	$1\frac{1}{4}$″
Drilling Capacity Hardwood	$1\frac{1}{4}$″	$1\frac{1}{4}$″	$1\frac{1}{4}$″	$1\frac{1}{2}$″	$1\frac{3}{4}$″
Watts Input full load	650 watts	650 watts	650 watts	1150 watts	1150 watts
Weight lbs.	12 lb.	$12\frac{1}{2}$ lb.	$15\frac{1}{2}$ lb.	25 lb.	25 lb.
Length	$14\frac{7}{8}$″	$15\frac{1}{8}$″		20″	20″
Vertical Drill Stand	U	U	U	G	G

SKIL-SHER
PORTABLE ELECTRIC DRILLS

DOUBLE INSULATED HEAVY DUTY

$\frac{1}{4}$″ $\frac{5}{16}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ Capacity.

	$\frac{1}{4}$″ Safetymate	$\frac{5}{16}$″ Safetymate	$\frac{3}{8}$″ Safetymate	$\frac{3}{8}$″ Safetymate	$\frac{1}{2}$″ Safetymate
CATALOGUE NUMBER	62	622	790	54	476
Drilling Capacity Steel	$\frac{1}{4}$″	$\frac{5}{16}$″	$\frac{3}{8}$″	$\frac{3}{8}$″	$\frac{1}{2}$″
Spindle Speed—High	1800 r.p.m.	1800 r.p.m.	900 r.p.m.	2000 r.p.m.	2000 r.p.m.
—Low				900 r.p.m.	750 r.p.m.
Watts Input Full load	330 watts	330 watts	330 watts	330 watts	460 watts
Weight Lbs.	$4\frac{1}{2}$	5	$5\frac{1}{4}$	$5\frac{1}{2}$	9
Vertical Drill Stand	SM	SM	SM	2SM	2S

DOUBLE INSULATED SUPER DUTY

$\frac{3}{8}$″ $\frac{1}{2}$″ $\frac{5}{8}$″ Capacity.

CATALOGUE NUMBER	89	83	832
Drilling Capacity Steel	$\frac{3}{8}$″	$\frac{1}{2}$″ dual speed	$\frac{5}{8}$″ dual speed
Drilling Capacity Hardwood	$\frac{3}{4}$″	$1\frac{1}{4}$″	$1\frac{1}{4}$″
Spindle Speed—Low		500 r.p.m.	370 r.p.m.
—High	900 r.p.m.	1000 r.p.m.	750 r.p.m.
Watts Input	460 watts	650 watts	650 watts
Weight	$7\frac{3}{4}$ lb.	15 lb.	15 lb.
Vertical Drill Stand	S	U	U

TRIGGER SPEED CONTROL

$\frac{1}{4}$″ $\frac{5}{16}$″ $\frac{3}{8}$″ $\frac{1}{2}$″ Capacity.

CATALOGUE NUMBER	1402H	1403H	1404H	1405H
Drilling Capacity in Steel	$\frac{1}{4}$″	$\frac{5}{16}$″	$\frac{3}{8}$″	$\frac{1}{2}$″
Spindle Speed Running Light	2500 r.p.m.	1800 r.p.m.	1000 r.p.m.	700 r.p.m.
Weight	4 lb.	$4\frac{1}{2}$ lb.	$4\frac{3}{4}$ lb.	$5\frac{3}{4}$ lb.

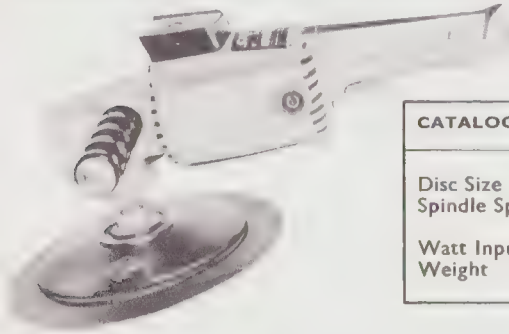
SKIL-SHER PORTABLE ELECTRIC TOOLS

STRAIGHT GRINDERS—*4″ 5″ 6″ Wheel size*

CATALOGUE NUMBER	32	30	39
Maximum Wheel Size	4″ x ½″ x ½″	5″ x ¾″ x ½″	6″ x 1″ x ⅝″
Spindle Speed Running Light	4500 r.p.m.	4500 r.p.m.	3800 r.p.m.
Watt Input full load	650 watts	950 watts	1150 watts
Weight	12 lb.	15 lb.	21 lb.

ANGLE GRINDERS

CATALOGUE NUMBER	56	58	59
Wheel Size	7″	9″	7″
Spindle Speed Running Light	8500 r.p.m.	6500 r.p.m.	5200 r.p.m.
Watt Input full load	1800 watts	1800 watts	1800 watts
Weight	16 lb.	16½ lb.	16½ lb.



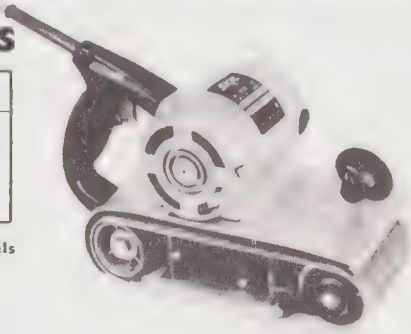
ANGLE SANDERS AND POLISHERS

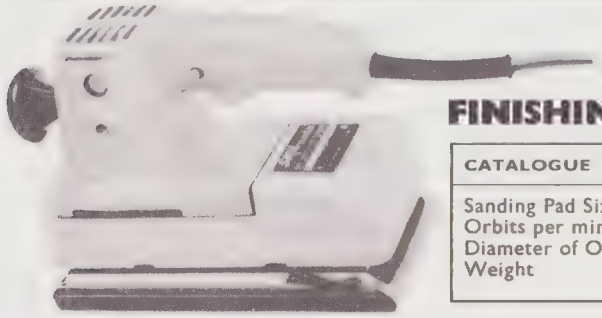
CATALOGUE NUMBER	27	57	1142	304
Disc Size	7″	7″	9″	7″
Spindle Speed Running Light	4200 r.p.m.	5200 r.p.m.	4500 r.p.m.	1250 r.p.m.
Watt Input full load	650 watts	1500 watts	750 watts	650 watts
Weight	12½ lb.	15¼ lb.	7⅛ lb.	13 lb.

BELT SANDERS

CATALOGUE NUMBER	448	449*	405	400*	324*
Belt Size	3 x 23¾	3 x 23¾	4 x 21¾	4 x 21¾	4½ x 26
Sanding Pad Size	3 x 6	3 x 6	4 x 4½	4 x 4½	4½ x 6¾
Speed feet per min.	1500	1300	1350	1350	1300
Weight	15 lb.	15¼ lb.	12 lb.	13 lb.	25 lb.

*Dustless Models



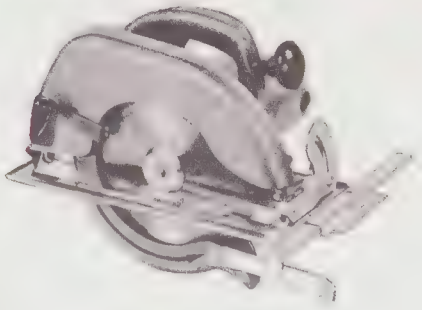


FINISHING SANDERS

CATALOGUE NUMBER	692	592
Sanding Pad Size	4½ x 9″	3⅝″ x 7″
Orbits per minute	5000	5000
Diameter of Orbit	3/16″	3/16″
Weight	7 lb.	4½ lb.

SKIL-SHER PORTABLE ELECTRIC TOOLS

SAWS

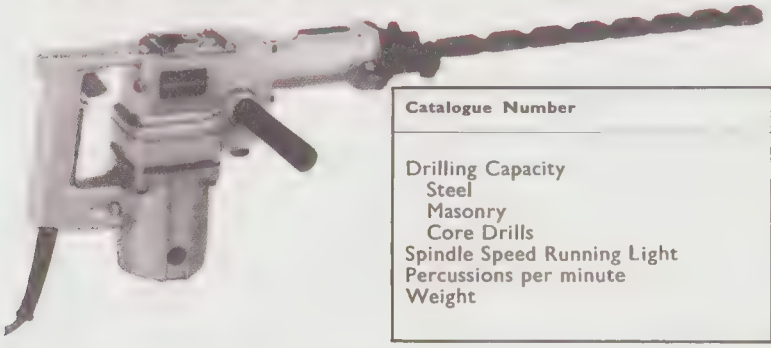


Catalogue Number	750	850	950
Diameter of Blade	7½″	8½″	9½″
Depth of Cut Vertical	2 9/16″	2 7/8″	3 3/8″
Depth of Cut 45° Mitre	1¾	1 5/16	2 7/16
Blade Speed Running Light	5200 r.p.m.	4600 r.p.m.	4400 r.p.m.
Watts Input full load	1200 watts	1300 watts	1800 watts
Weight	15½ lb.	19½ lb.	21¼ lb.

SKILSAW STRAIGHT DRIVE

Catalogue Number	Blade Size
STRAIGHT DRIVE	
552	6½″
553	7¼″
858	8¼″
554H	8¼″
554	8¼″
555H	9¼″
860	10″
WORM DRIVE	
77	7¼″
107	10″
127	12″

SKILSAW WORM DRIVE



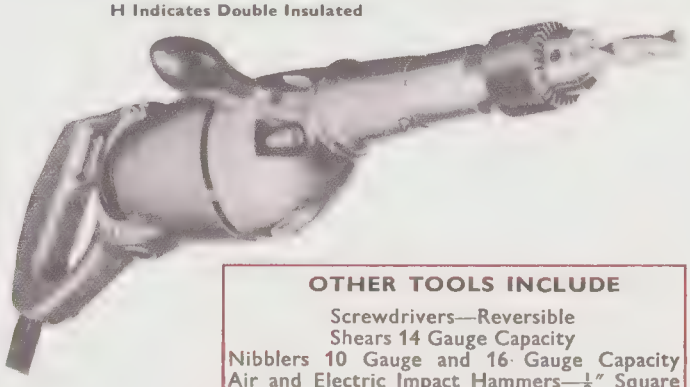
ROTO-HAMMERS

Catalogue Number	706H	1706H	726H	728	736H
Drilling Capacity					
Steel	5/16″	5/16″	5/16″	5/16″	
Masonry	11/16″	11/16″	1 1/8″	1 1/8″	1 1/8″
Core Drills			1½″	2″	3½″
Spindle Speed Running Light	650	750	520	500	315
Percussions per minute	3250	3750	2400	2900	2300
Weight	9¼ lb.	8¼ lb.	14 lb.	15 lb.	30 lb.

H Indicates Double Insulated

PERCUSSION DRILLS

Catalogue Number	131	147
Drilling Capacity		
Steel	3/8″	½″
Concrete	½″	1″
Brick	¾″	1¼″
Spindle Speed Running Light	900 r.p.m.	750/2000 r.p.m.
Percussions per minute	10000	10000/27000
Watts Input full load	320 watts	550 watts
Weight	8 lb.	12½ lb.



OTHER TOOLS INCLUDE

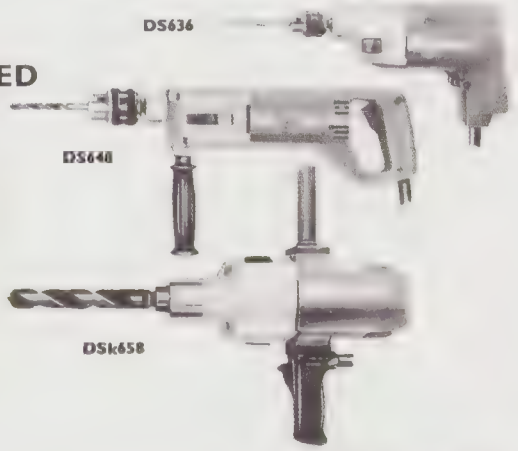
Screwdrivers—Reversible
Shears 14 Gauge Capacity
Nibblers 10 Gauge and 16 Gauge Capacity
Air and Electric Impact Hammers—½″ Square Drive
Air Hammers and Chisels
Shopmate. Combination Machine

PORTABLE ELECTRIC DRILLS—SINGLE SPEED

SPECIFICATION	ASz636	ASk636	ASz648d	ASz648b	ASz648a	ASk654 1	ASk658	ASk672
Drilling Capacity in Steel	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1
Spindle Speed Running Light	1770 r.p.m.	1300 r.p.m.	2600 r.p.m.	1100 r.p.m.	700 r.p.m.	630 r.p.m.	610 r.p.m.	370 r.p.m.
Spindle Speed full load	1050 r.p.m.	770 r.p.m.	1600 r.p.m.	700 r.p.m.	440 r.p.m.	410 r.p.m.	350 r.p.m.	250 r.p.m.
Watts Input on full load	230 watts	230 watts	500 watts	500 watts	500 watts	360 watts	540 watts	1050 watts
Weight	$2\frac{3}{4}$ lb.	$2\frac{3}{4}$ lb.	$6\frac{1}{2}$ lb.	$6\frac{1}{2}$ lb.	$6\frac{1}{2}$ lb.	$9\frac{1}{4}$ lb.	$12\frac{1}{2}$ lb.	$18\frac{3}{4}$ lb.

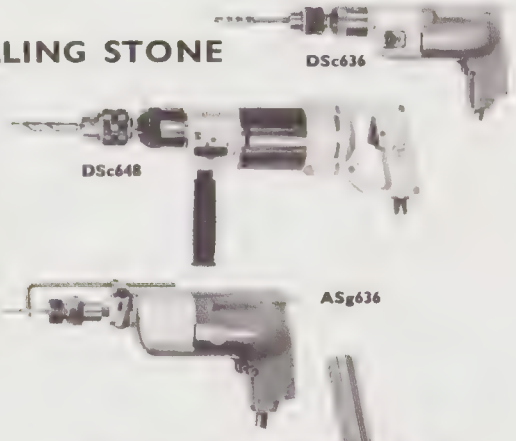
PORTABLE ELECTRIC DRILLS—TWO SPEED

SPECIFICATION	DS636	DSk636	DS648	DSk658
Drilling Capacity in Steel	$\frac{1}{4}$″	$\frac{5}{16}$″	$\frac{5}{8}$″	$\frac{3}{4}$″
Drilling Capacity in Wood	$\frac{1}{2}$″	$\frac{9}{16}$″	$1\frac{3}{16}$″	$1\frac{3}{8}$″
Spindle Speed Running Light				
Low Speed	850 r.p.m.	430 r.p.m.	370 r.p.m.	200 r.p.m.
High Speed	1850 r.p.m.	1050 r.p.m.	900 r.p.m.	420 r.p.m.
Weight	3 lb.	$3\frac{1}{4}$ lb.	$7\frac{1}{4}$ lb.	$13\frac{1}{2}$ lb.



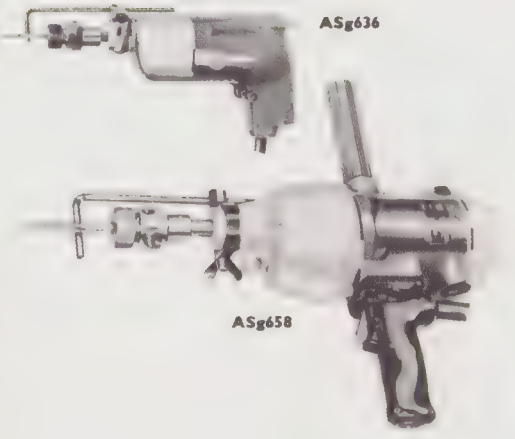
ROTARY PERCUSSION DRILLS—FOR DRILLING STONE

SPECIFICATION	DSc636	DSc648
Drilling Capacity in Stone	$\frac{3}{8}$″	$1\frac{3}{16}$″
Percussions per minute	13000/19000	6000/14500
Spindle Speed Running Light		
Low Speed	820 r.p.m.	370 r.p.m.
High Speed	1600 r.p.m.	900 r.p.m.
Watts Input full load	230 watts	500 watts
Weight	5 lb.	9 lb.



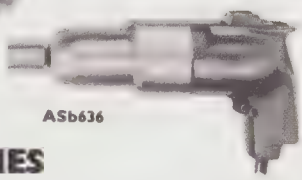
TAPPERS

SPECIFICATION	ASg636	ASg648	ASg658
Tapping Capacity in Steel	$\frac{1}{4}$″	$\frac{3}{8}$″	$\frac{5}{8}$″
Spindle Speed Tapping	450 r.p.m.	240 r.p.m.	150 r.p.m.
Spindle Speed Running Back	580 r.p.m.	550 r.p.m.	330 r.p.m.
Watts Input full load	230 watts	500 watts	540 watts
Weight	$3\frac{1}{2}$ lb.	8 lb.	$11\frac{1}{2}$ lb.



PORTABLE ELECTRIC TOOLS

ASb53-2


ASb636

ASb658

ASb110

IMPACT WRENCHES

SPECIFICATION	ASb636	ASb346 1	ASb53 2	ASb658	ASb110
Maximum Screw Size	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{3}{16}$
Drive Square	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{3}{4}$″	1″	1″
Spindle Speed Running Light	1350 r.p.m.	1500 r.p.m.	1400 r.p.m.	1400 r.p.m.	—
Spindle Speed full load	850 r.p.m.	850 r.p.m.	750 r.p.m.	640 r.p.m.	780 r.p.m.
Taps per minute	1700	1700	1500	1280	1560
Watts Input full load	200 watts	280 watts	480 watts	450 watts	1100 watts
Weight	5 lb.	$7\frac{1}{4}$ lb.	11 lb.	15 lb.	$27\frac{1}{2}$ lb.

HAND GRINDERS

MSh636

MShy663

	MSh636	MSh648	MShy663
Collet Capacity	$\frac{1}{4}$″ shank	$\frac{5}{16}$″ shank	—
Grinding Wheel Size	$\frac{3}{4}$″ diam.	$2\frac{1}{2}$″ diam.	5″x1″x20mm
Spindle Speed	28000 r.p.m.	23000 r.p.m.	7000 r.p.m.
Watts Input full load	230 watts	500 watts	750 watts
Weight	$3\frac{1}{4}$ lb.	$6\frac{3}{4}$ lb.	13 lb.

ANGLE GRINDERS AND SANDERS

MSf663c

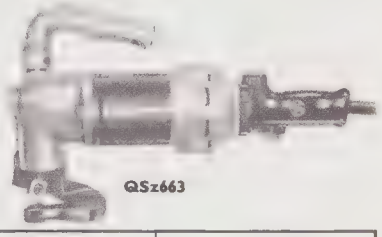
MSf3675d,c

SPECIFICATION	MSf63a/20	MSf663c	MSf663b	MSf679d	MSf679c	MSf676b
Diameter of Grinding Disc	$5\frac{1}{4}$″	7″	$6\frac{3}{4}$″	7″	9″	$6\frac{3}{4}$″/$8\frac{3}{4}$″
Spindle Speed Running Light	1700 r.p.m.	6800 r.p.m.	4900 r.p.m.	8500 r.p.m.	6600 r.p.m.	4400 r.p.m.
Watts Input full load	750 watts	750 watts	750 watts	2000 watts	2000 watts	1300 watts
Weight	$11\frac{1}{4}$ lb.	$13\frac{1}{4}$ lb.	12 lb.	14 lb.	14 lb.	$14\frac{1}{4}$ lb.
All of these Machines have 14 mm Screwed Spindle						

SHEET METAL SHEARS

QSz636

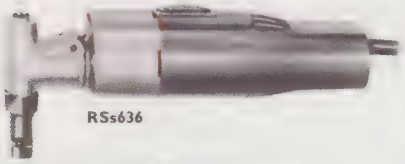
QSz656-1


QSz663

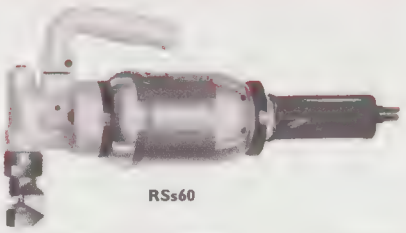
SPECIFICATION	QSz636	QSz656-1	QSz663
Cutting Capacity in Steel	14 S.W.G.	11 S.W.G.	7 S.W.G.
Radius of Smallest Curve	$\frac{3}{4}$″	2″	2″
Cutting Speed feet per min.	10	8	5
Incisions per min.	1700	1800	1700
Watts Input full load	230 watts	480 watts	750 watts
Weight	5 lb.	$12\frac{1}{4}$ lb.	22 lb.

PORTABLE ELECTRIC TOOLS

NIBBLERS


RSs636

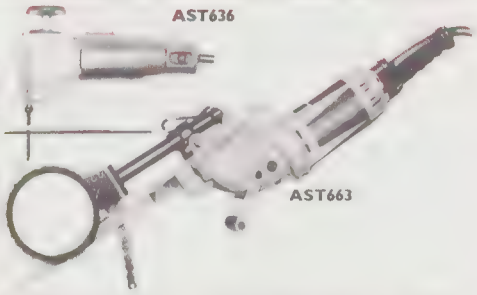
RSs654-2


RSs60

Specification	RSs636	RSs636-1*	RSs654-2†	RSs60
Capacity	18 S.W.G.	18 S.W.G.	14 S.W.G.	11 S.W.G.
Radius of Smallest Curve	$\frac{1}{8}$″	$\frac{3}{4}$″	2″	$4\frac{3}{4}$″
Cutting Speed feet/min.	4	6	5	4
Incisions per min.	1100	1800	820	700
Watts Input full load	230 watts	230 watts	360 watts	500 watts
Weight	$4\frac{1}{4}$ lb.	$3\frac{1}{2}$ lb.	11 lb.	$12\frac{3}{4}$ lb.
		**RSs636-2 for corrugated Iron*		*†RSs654-3 for corrugated Iron*

HAND SAWS

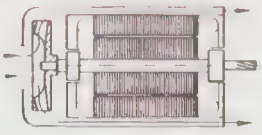
Specification	AST636	AST663
Cutting Capacity Softwood	2	
Cutting Capacity Pipe Wall Thickness		$\frac{5}{8}$″
Strokes per min.	1600	300
Length of Stroke	$\frac{3}{4}$″	$2\frac{3}{8}$″
Watts Input full load	230 watts	750 watts
Weight	$4\frac{3}{4}$ lb.	$18\frac{1}{2}$ lb.

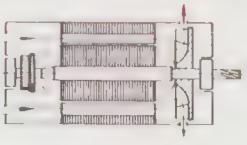


HIGH FREQUENCY ELECTRIC TOOLS

FEATURES

- Totally enclosed motor and bearings
- Surface cooled
- High capacity
- Light weight
- No rotating windings
- No carbon brushes
- High grinding and cutting performance


Surface Cooling


Normal Air Cooling

Type	Wheel Size	Spindle Speed	Watts Input	Weight
MSho 850	3″ x $\frac{3}{4}$″	12,000	650	8 lb.
MSho 867-IA	3″ x $1\frac{1}{4}$″	12,000	1,350	$13\frac{1}{4}$ lb.
MSho 867-IB	5″ x $\frac{3}{4}$″	12,000	1,350	$13\frac{1}{4}$ lb.
MShov 867-IA	$2\frac{1}{2}$″ x $2\frac{1}{2}$″	12,000	1,350	15 lb.
MShyo 867-I	6″ x $1\frac{1}{2}$″	5,500	1,350	$18\frac{3}{4}$ lb.
MSfo 868-d	7″ Disc	8,400	1,350	$16\frac{1}{4}$ lb.
MSfo 868-c	$9\frac{1}{4}$″ Disc	6,500	1,350	$16\frac{1}{4}$ lb.
MSfo 868-b	7″/9″ Disc	4,300	1,350	$16\frac{1}{4}$ lb.

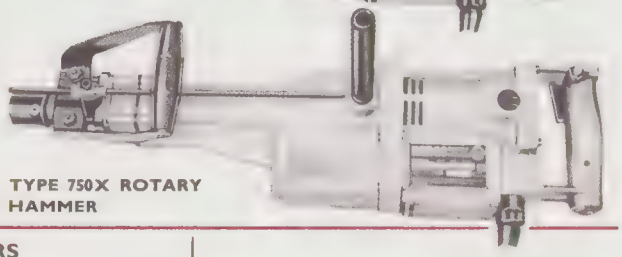
Other Tools Available in High Frequency
Single and Two Speed Drills Impact Wrenches
Screw Drivers & Tappers, Shears, Nibblers

FREQUENCY CONVERTERS: with power output of $2\frac{1}{2}$ KVA, 5 KVA, $7\frac{1}{2}$ KVA, 10 KVA, $12\frac{1}{2}$ KVA, 15 KVA, 20 KVA, 25 KVA . . . can be supplied for High Frequency Installations.
Complete details of all High Frequency Equipment will be supplied on request.

KANGO ELECTRIC HAMMERS

TYPE 800X DEMOLITION HAMMER

SPECIFICATIONS	800X	750X
Impacts per minute, Hammering	1800	2000
Drilling	—	1800
Drilling Speed r.p.m.	—	250
Maximum Hole Capacity	$3\frac{1}{16}$″	4″
Length	25″	$25\frac{3}{4}$″
Weight	$21\frac{1}{2}$ lb.	$22\frac{3}{4}$ lb.
Watts Input full load	800 watts	750 watts



TYPE 750X ROTARY HAMMER

TOOLS USED WITH BOTH 750X AND 800X HAMMERS

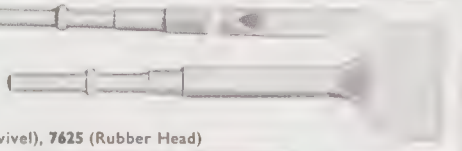
POINTS 12″ 7960 · 15″ 7961 · 18″ 7962 · 24″ 7963

CHISELS 12″ 7905 · 15″ 7906 · 18″ 7907 · 24″ 7908

TOOL BLANKS 11″ 7900 · 14″ 7901 · 17″ 7902 · 23″ 7903

BRICK RAKING CHISEL
7571 Free Turning Shank
7971 Locked Shank

SCALING CHISEL
Locked Shank 2″ **7910**, 3″ **7911**
Free Turning Shank 2″ **7574**, 3″ **7575**

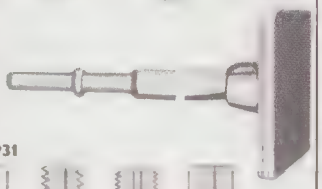


VIBRATING TOOLS — 7610, 7623, 7624 (Swivel), **7625** (Rubber Head)

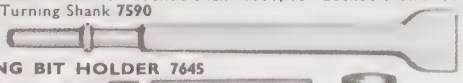
BUSH HAMMER HOLDER 7599
BUSH HAMMER DISC 600
TUNGSTEN CARBIDE BUSH HAMMER DISC
Coarse Finish **698**, Fine Finish **699**

TAMPING TOOLS

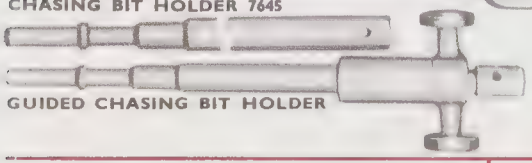
603/7920 — 3″ x 2″ — 12″ long	611/7920 — $4\frac{1}{4}$″ x 4″ — 12″ long
603/7921 — 3″ x 2″ — 18″ long	611/7921 — $4\frac{1}{4}$″ x 4″ — 18″ long
603/7922 — 3″ x 2″ — 24″ long	611/7922 — $4\frac{1}{4}$″ x 4″ — 24″ long
604/7920 — 3″ x 4″ — 12″ long	605/7920 — 6″ x 4″ — 12″ long
604/7921 — 3″ x 4″ — 18″ long	605/7921 — 6″ x 4″ — 18″ long
604/7922 — 3″ x 4″ — 24″ long	605/7922 — 6″ x 4″ — 24″ long



COMB HOLDERS 12″ Locked Shank **7930**, 18″ Locked Shank **7931**
12″ Free Turning Shank **7590**



CHASING BIT HOLDER 7645



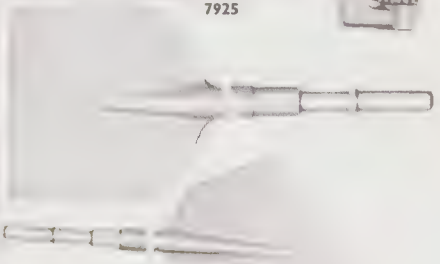
GUIDED CHASING BIT HOLDER

CHASING BIT EJECTOR 594

CHASING BITS
$1\frac{1}{8}$ — **659**
$1\frac{3}{8}$ — **658**

ROLLER BRUSH HAMMER TOOL 7634
DOUBLE ROLLER BRUSH HAMMER TOOL 7697

FLOOR CLEANING TOOL 7925

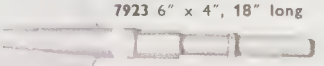


SILAGE CUTTING TOOL 7949

DRUM OPENING TOOL 7647

ELECTRODE DRIVERS $\frac{1}{4}$″ **7630** · $\frac{5}{8}$″ **7631** · $\frac{3}{4}$″ **7632** · 1″ **7633**

SPADES
7923 6″ x 4″, 18″ long



7927 Cranked
7928 Pointed
7929 Cranked Pointed

TOOLS USED WITH 750X ONLY

SPIRAL TUNGSTEN CARBIDE Tipped Drills
$\frac{5}{16}$″ x $4\frac{1}{2}$″ – 2″ x 9″

Drill Holder 7528
Drill Ejector 529

CORE DRILLS

2″	$2\frac{1}{2}$″	3″	$3\frac{1}{2}$″	4″
819	**820**	**822**	**823**	**824**

TOOLS USED WITH 800X ONLY

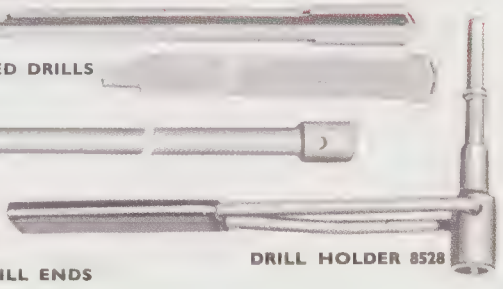
CRUCIFORM DRILLS
$\frac{13}{32}$″ x 4″ — $1\frac{1}{8}$″ x 12″

TUNGSTEN CARBIDE TIPPED DRILLS
$\frac{1}{2}$″ x 7″ — $1\frac{7}{16}$″ x 13″

HOLDERS $1\frac{1}{4}$″ to $3\frac{1}{8}$″
10″ **475**, 16″ **476**, 22″ **477**

DRILL EJECTOR 529

DRILL ENDS



DRILL HOLDER 8528

GMF GRINDERS

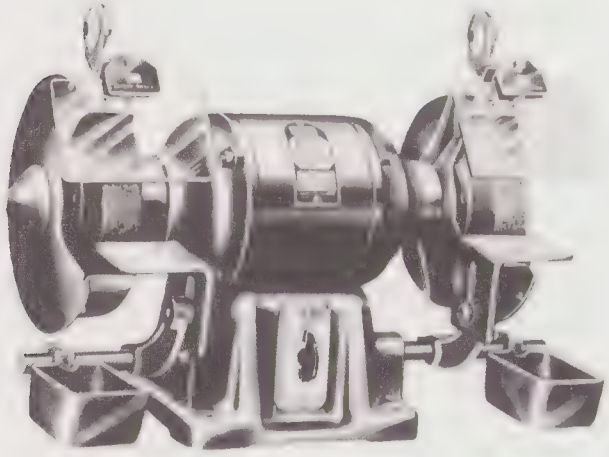
10" MAXI GRINDER. Single or Three Phase.

MOTOR

Single Phase 220/240 volts, A.C., 2850 r.p.m. Rated 1¼ H.P.
Three Phase 380/415 volts, A.C., 2850 r.p.m. Rated 1½ H.P.
Both complete with built-in switch.

WHEEL SIZE

Single Phase Motor 10"x1"x1", Three Phase Motor 10"x1½"x1"
Standard Equipment: Adjustable Steel Toolrests, Water Cups, Wheel Guards, Spark Arrestor, Eye Shields.



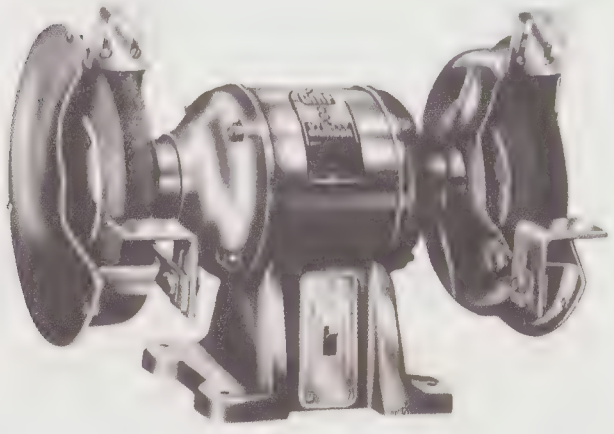
8" HEAVY DUTY GRINDER. Single or Three Phase.

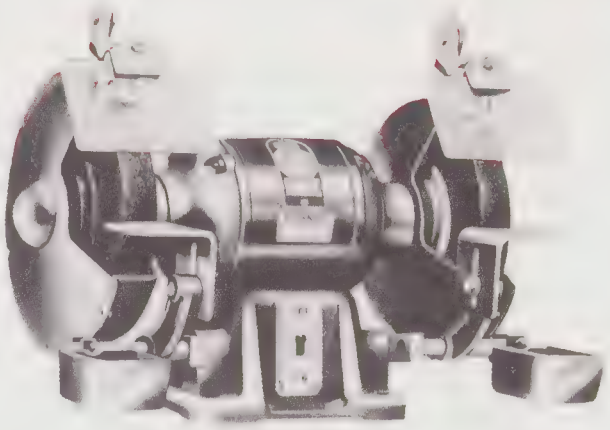
MOTOR

Single Phase 220/240 volts, A.C., 2850 r.p.m. Rated ¾ H.P.
Three Phase 380/415 volts, A.C., 2850 r.p.m. Rated 1 H.P.
Both complete with built-in switch.

WHEEL SIZE

Flat Wheels 8" x 1" x ⅝"
Cup Wheels 8" x 1½" x ⅝", recessed 6" x 1" for Drill Grinding.
Standard Equipment: Adjustable Steel Toolrests, Water Cups, Wheel Guards, Spark Arrestor, Eye Shields.





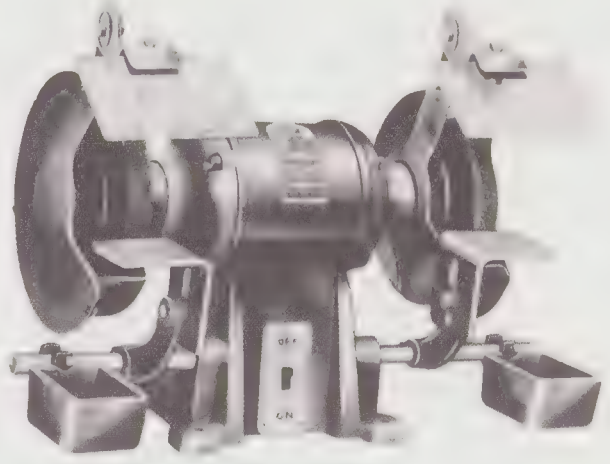
8" SENIOR GRINDER. Single or Three Phase.

MOTOR

Single Phase 220/240 volts, A.C., 2850 r.p.m. Rated 1 H.P.
Three Phase 380/415 volts, A.C., 2850 r.p.m. Rated 1½ H.P.
Both complete with built-in switch.

WHEEL SIZE

Flat Wheel 8" x 1½" x 1"
Cup Wheel 7" x 1½" x 1", recessed 6" x 1" for Drill Grinding.
Standard Equipment: Adjustable Steel Toolrests, Water Cups, Wheel Guards, Spark Arrestor, Eye Shields.



8" UTILITY GRINDER. Single Phase only.

MOTOR

Single Phase 220/240 volts, A.C., 2850 r.p.m. Rated ½ H.P.
Complete with switch.

WHEEL SIZE

Flat Wheels 8"x1"x⅝", Cup Wheels 8"x1"x⅝", recessed 6"x½"
Standard Equipment: Adjustable Steel Toolrests, Spark Arrestor.

GMF GRINDERS

7″ INDUSTRIAL GRINDER. Single Phase Only.

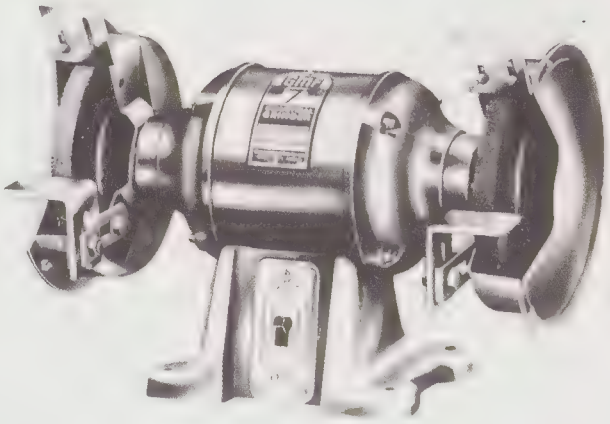
MOTOR

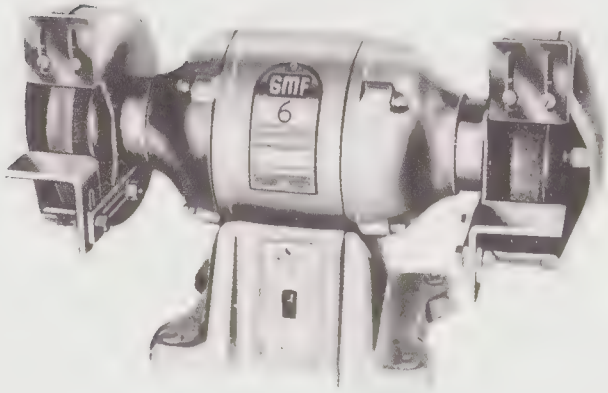
Single Phase 220/240 volts, A.C., 2850 r.p.m. Rated ½ H.P. Complete with switch.

WHEEL SIZE

Flat Wheels 7″ x 1″ x ⅝″
Cup Wheels 7″ x 1″ x ⅝″, recessed 5″ x ½″

Standard Equipment: Adjustable Steel Toolrests, Spark Arrestor.





6″ INDUSTRIAL GRINDER. Single Phase Only.

MOTOR

Single Phase 220/240 volts, A.C., 2850 r.p.m. Rated ⅓ H.P. Complete with switch.

WHEEL SIZE

Flat Wheel 6″ x ¾″ x ⅝″
Cup Wheel 6″ x ¾″ recessed 4″ x ½″

Standard Equipment: Adjustable Steel Toolrests, Spark Arrestor.

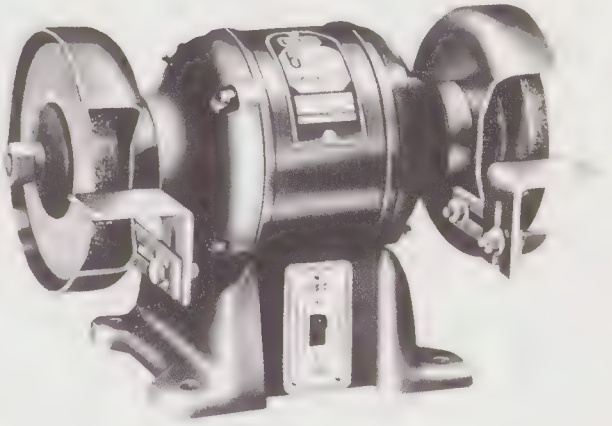
6″ HANDY GRINDER. Single Phase Only.

MOTOR

Single Phase 220/240 volts, A.C., 2850 r.p.m. Rated ¼ H.P. Complete with switch.

WHEEL SIZE

Flat Wheel 6″ x ⅝″ x ⅝″
Supplied complete with Adjustable Steel Toolrests.



ALL MACHINES CAN BE SUPPLIED COMPLETE WITH SAFETY EYE SHIELDS, WIRE BRUSH OR POLISHING MOP.

EXTENSION SPINDLES, LEFT OR RIGHT HAND

THE G.M.F. DRILL GRINDING ATTACHMENT FITS ALL MACHINES EXCEPT 10″ MAXI & 6″ HANDY.

Other Machines include 6″, 7″, 8″, 10″ Buffing and Polishing Single or Three Phase Motor.
6″ Tipped Tool Grinder for Grinding and Lapping Carbide Tipped Tools.

PEDESTAL TYPE GRINDERS

All Machines Supplied with Vee Belts and Switchgear. Buffing Spindle Extensions Available for 1″ and 1¼″ Spindles

10″ Single Phase Model also Available.

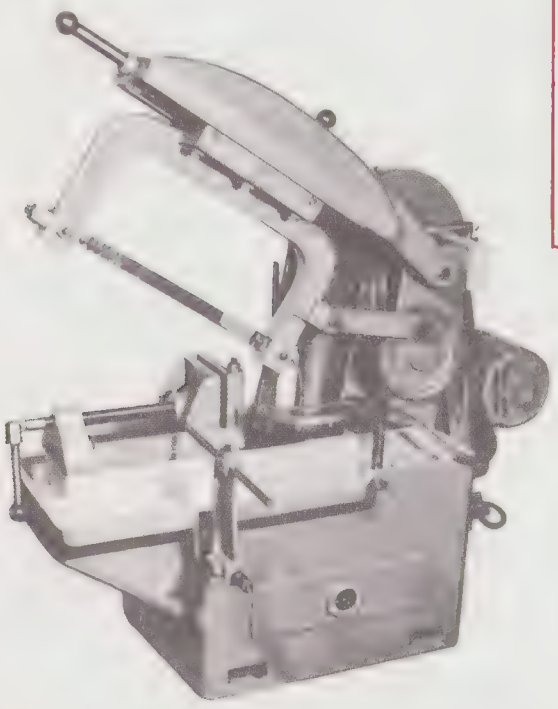
Wheel Size	Spindle Diameter	Spindle Speeds	Three-Phase Motor
10″ x 1½″	1″	2750 2240	1 H.P.
12″ x 2″	1¼″	2100 1880	2 H.P. or 3 H.P.
14″ x 2″	1¼″	1800 1400	3 H.P.
14″ x 2½″	1¼″	1800 1400	3 H P
16″ x 3″	1½″	1600 1300	5 H.P
18″ x 2½″	1¾″	2200 1900	5 H.P.
18″ x 3″	1¾″	1500 1200	7½ H.P.
20″ x 3″	2″	1450 1150	7½ H.P.

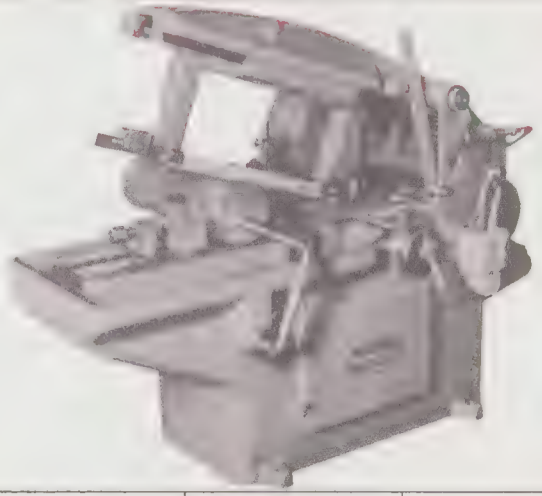
TOOL POST GRINDERS

Specification	Model C0	Model C1	Model C2
Motor	.25 H.P. Single Phase	.3 H.P. Single Phase	1 H.P. Three Phase or ½ H.P. Single Phase
Motor Speed	12,500 r.p.m.	12,500 r.p.m.	2,800 r.p.m.
Wheel Size—			
External Grinding	3″ x ½″ x ⅜″	5″ x ½″ x ½″	6″ x ½″ x ½″
Internal Grinding	¾″ x ½″ x ¼″	1″ x ½″ x ¼″	1½″ x ½″ x ½″
Belt Size	17″ x ⅝″ Woven Cotton	20″ x 1″ Woven Cotton	R91 Vee Belts
Spindle Speed -			
External	7,000 r.p.m.	5,000 r.p.m.	3,000 r.p.m.
Internal	24,000 r.p.m.	25,000 r.p.m.	9,000 r.p.m.
Weight	16½ lb.	26 lb.	80 lb.

MODEL C3 EXTRA HEAVY DUTY 2 H.P. Also Available

POWER HACKSAWING MACHINES

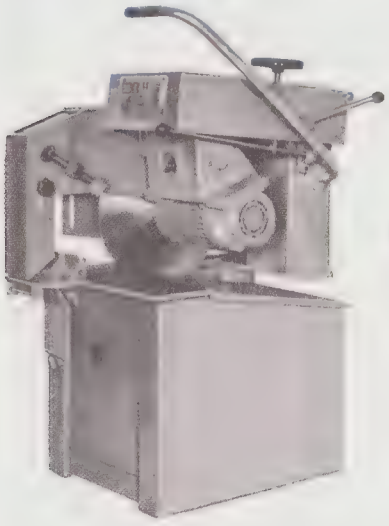


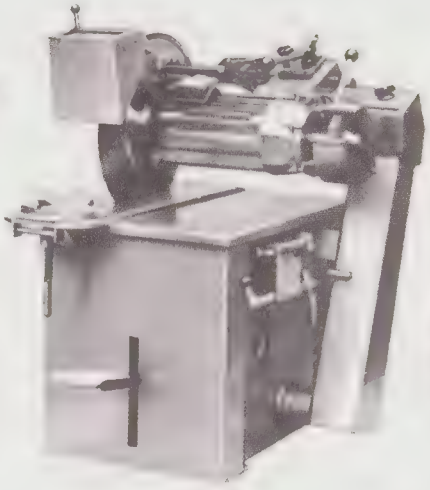


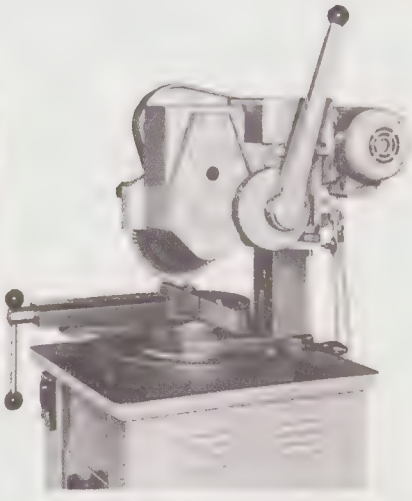
Model	Parkanson 8″	Parkanson 6″	Lampard 6″	Advance 6″
Cutting Capacity	8″	6″	6″	6″
Saw Blade Size	16″ x 1¼″	14″ x 1″	14″ x 1″	12″ x 1″
Cutting Speed r.p.m.	80 and 120	135	90 and 128	120
Motor H.P.	2 H.P.	¾ H.P.	½ H.P.	½ H.P.

TRENNJAEGER UNIVERSAL CUTTING OFF MACHINES

Phone No 770351







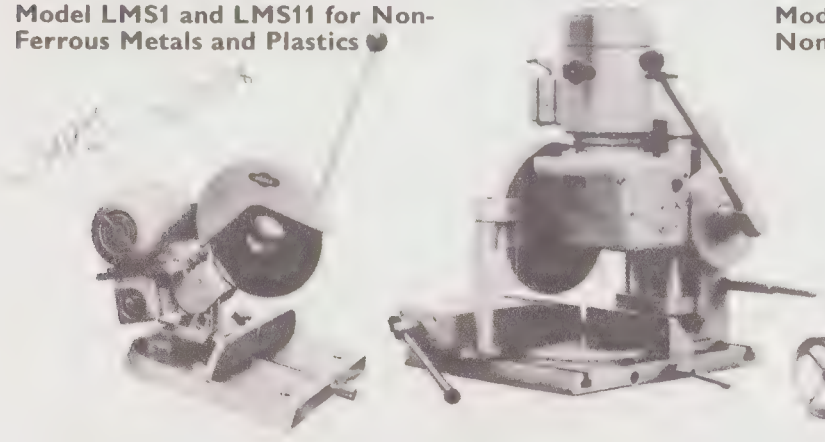
Model	UNI 110	UNI 16	UNI 17
Blade Size	$20\frac{1}{2}$ x $\frac{1}{8}$	$20\frac{1}{2}$ x $\frac{1}{8}$	$22\frac{1}{16}$ x $\frac{5}{32}$
Motor 3 ph. 3,000 r.p.m.	10 H.P.	5, 6, 8 or 10 H.P.	12, 15 or 17 H.P.
Cutting Capacity R.S.J.	6″ x 3″		
—Angle Iron	4″ x 4″	4″ x 4″	6″ x 6″
—Solid	$1\frac{1}{2}$″ diam.	$1\frac{1}{4}$″ diam.	$1\frac{9}{16}$″
—Pipe	4″	4″	6″

EISELE METAL CUTTING CIRCULAR SAWS

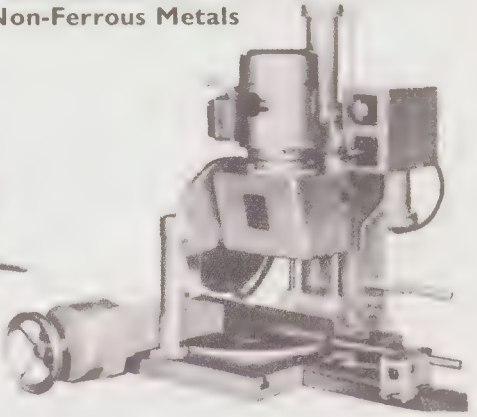
Model	LMS1	LMS11
Blade Size	250 mm x 2 x 40	350 mm x 3 x 40
Motor	1.5 H.P.	2/2.75 H.P.
Spindle Speed—High	2000 r.p.m.	2000 r.p.m.
—Low	1000 r.p.m.	1000 r.p.m.
Non-Ferrous Cutting Capacity		
—Pipes	3″	$4\frac{1}{2}$″
—Flat Sections	4″ x $2\frac{1}{2}$″	$7\frac{1}{2}$″ x 3″

Model	VMS1	VMS2
Blade size	9″ x $\frac{5}{64}$″	10″ or 11″
Motor	1 H.P.	$1\frac{1}{2}$ H.P.
Blade Speed	50 r.p.m.	40 r.p.m.
Cutting Capacity—Round	$2\frac{3}{8}$″	3″
—Angle	4″ x $2\frac{3}{4}$″	$5\frac{1}{2}$″ x 4″
Flat Bar	4″ x $2\frac{1}{4}$″	$5\frac{1}{2}$″ x $2\frac{3}{4}$″

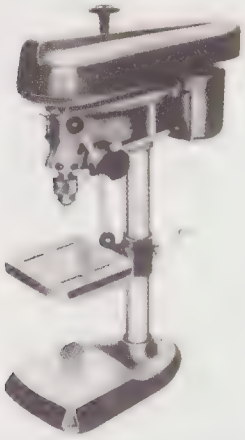
Model LMS1 and LMS11 for Non-Ferrous Metals and Plastics

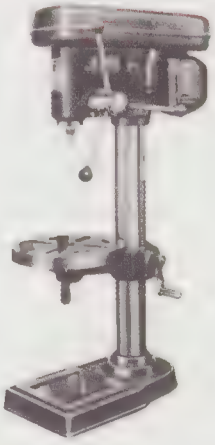


Model VMS1 and VMS2 for Steel and Non-Ferrous Metals



DRILLING MACHINES





	Bench			Floor		
Model	Richardson E39	Waldown 8SN	Kira NSD340	Richardson E40	Waldown 2M	Kira Kid .420L
Drilling Capacity	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{7}{8}$″	$\frac{3}{4}$″
Spindle Fitting	Jacobs Taper	Jacobs Taper	Jacobs Taper	Jacobs Taper	2MT	2MT
Maximum Distance						
Spindle to Table	10″	$13\frac{3}{4}$″	$19\frac{7}{16}$″	$29\frac{3}{8}$″	28″	23″
Spindle to Base	$20\frac{1}{4}$″	19″	$24\frac{1}{2}$″	43″	48″	$46\frac{3}{4}$″
Spindle Speeds	6	4	4	6	9	8
Quill Stroke	$3\frac{3}{8}$″	4″	$3\frac{1}{8}$″	$3\frac{3}{8}$″	4″	$5\frac{1}{8}$″

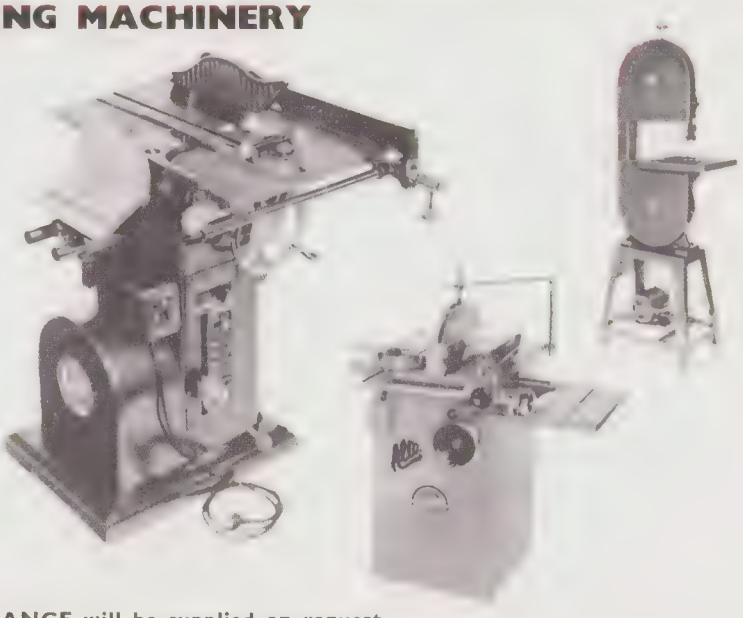
$\frac{1}{2}$″ Capacity Machines are available with No. 1 or No. 2 Morse Taper Spindle.
Accessories include: Round Table, Slow Speed Attachment, Mortising, Routing and Moulding Heads, Table Raising Attachment.

WOODFAST WOODWORKING MACHINERY

UNIVERSAL WOODWORKER

Comprises — 12″ Circular Saw.
6″ Jointer.
10″ Disc Sander.

Available in Single Speed or Variable Models.
Single Phase or Three Phase Motor.
Accessories include — Band Saw, Lathe, Mortiser, Jig Saw, Moulder.



14″ BANDSAW

Cuts up to 7″ thickness
Blade size $99\frac{1}{2}$″ up to $\frac{1}{2}$″ wide
Table tilts to 45

12″ SAW BENCH

Blade size 12″ x 1″
Maximum cut $3\frac{3}{4}$″
Table size 25″ x 21″
Single Phase or Three Phase Motors

Details of all Machines in the WOODFAST RANGE will be supplied on request.

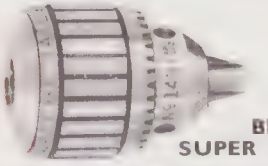
JACOBS DRILL AND TAP CHUCKS

LIGHT DUTY PLAIN BEARING

TAPER MOUNTED				THREAD MOUNTED			
Chuck Model	Capacity	Taper Mount	Key No.	Chuck Model	Capacity	Threaded Mount	Key No.
O	0 - 5/32"	0	0	1B 3/8-24	0-1/4"	3/8-24	1
1A	0 - 1/4"	1	1	2B 3/8-24	0-3/8"	3/8-24	2
2A	0 - 3/8"	2	2	6B 1/2-20	0-1/2"	1/2-20	3
6A-2A	0 - 1/2"	2	3	33B 3/8-24	5/64"-1/2"	3/8-24	32
6A-33	0 - 1/2"	33	3	33B 1/2-20	5/64"-1/2"	1/2-20	32
33	5/64"-1/2"	33	32	33B 5/8-16	5/64"-1/2"	5/8-16	32

MEDIUM DUTY PLAIN BEARING

TAPER MOUNTED				THREAD MOUNTED			
Chuck Model	Capacity	Taper Mount	Key No.	Chuck Model	Capacity	Threaded Mount	Key No.
7	0 - 1/4"	2 short	7	7B 3/8-24	0-1/4"	3/8-24	7
7-1A	0 - 1/4"	1	7	7B 1/2-20	0-1/4"	1/2-20	7
30	0 - 5/16"	2 short	30	30B 3/8-24	0-5/16"	3/8-24	30
30-1A	0 - 5/16"	1	30	30B 1/2-20	0-5/16"	1/2-20	30
32	0 - 3/8"	2	32	32B 1/2-24	0-3/8"	1/2-20	32
34	0 - 1/2"	6	3	34B 5/8-16	0-1/2"	5/8-16	3
3	0 - 17/32"	3	3	34B 3/4-16	0-1/2"	3/4-16	3
3A	1/8"-5/8"	3	3	36B 5/8-16	3/16"-3/4"	5/8-16	4
36	3/16"-3/4"	3	4	36B 3/4-16	3/16"-3/4"	3/4-16	4



BALL BEARING SUPER CHUCK

Chuck Model	Capacity	Taper Mount	Key No.
8½ N	0 - 1/4"	2 short	30
11 N	0 - 3/8"	2	32
14 N	0 - 1/2"	3	3
16 N	1/8"-5/8"	3	4
18 N	1/8"-3/4"	4	4
20 N	3/8"-1"	5	5

HI-TORQUE KEYLESS CHUCK

Chuck Model	Part. No.	Capacity	Taper Mount
650	650-25	0-1/4"	2 short
670	670-02	1/32"-3/8"	2
680	680-06	1/16"-1/2"	6

Also available in thread mounted models

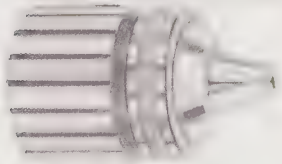
TAP CHUCKS WITH RUBBER FLEX COLLETS

Chuck Model	Tap Capacity	Collet No.	Taper Mount	Hexagon Keysize
420-01	10-5/16"	J420	1	1/8"
420-02	10-5/16"	J420	2 short	1/8"
421-01	0-1/4"	J421	1	1/8"
421-02	0-1/4"	J421	2 short	1/8"
440-02	5/16"-5/8"	J440	2	5/32"
440-06	5/16"-5/8"	J440	6	5/32"

MODEL 96 KEY TYPE COLLET CHUCK

Capacity up to 1⅜"

CENTRE REST CHUCK



Model 100CR, Capacity 1/4"-3/4"
Tapermount 3 Keyless

SPINDLE NOSE LATHE CHUCK

Capacity Range 1/16" to 1⅜"

CHUCK KEYS

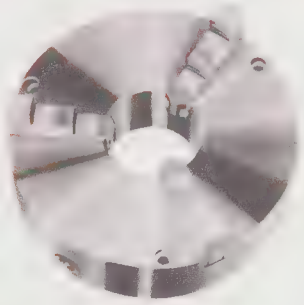
Key No.	Chuck Model
0	O, OB
1	1A, 1B, 1B
2	2A, 2B
3	3, 3A, 3B, 6A33, 6A2A, 6B, 34, 34B, 14N, 3AE
4	36, 36B, 16N, 18N, 36E
5	20N
7	7, 7-1A, 7B
30	30, 30-1A, 30B, 8½N
32	32, 32B, 33, 33B, 11N

CHUCK ARBORS

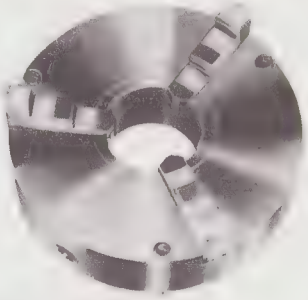
Morse Taper	Jacobs Taper	Jacobs Taper	Large Diameter	Small Diameter	Length of Taper	CHUCK MODEL
0	0 3 33	0	.25000	.22844	.43750	0
		1	.38400	.33341	.65625	1A, 7-1A, 30-1A, 250-1A, 400-01, 420-01, 421-01, 650-01
1	0 1 2 3 4 5 6 33					
		2	.55900	.48764	.87500	2A, 6A-2A, 11N, 32, 375, 440-02, 441-02
2	1 2 3 4 5 6 E33	2 short	.54880	.48764	.75000	7, 8½N, 30, 250, 312, 420-02, 421-02, 650-S2, 660-S2
3	1 2 3 4 5 6 33	3	.81100	.74610	1.21875	3, 3A, 14N, 16N, 36, 75A, 100CR
		4	1.12400	1.03720	1.65625	18N
4	1 2 3 4 5 6 33	5	1.41300	1.31611	1.87500	20N
		6	.67600	.62409	1.00000	34, 500, 440-06, 441-06
5	2 3 4 5 6	33	.62401	.56051	1.00000	6A-33, 633C, 633D, 33, 3333C
		E	.78860	.74717	.79680	3AE, 6AE, 36E

BURNERD: GEARED SCROLL CHUCKS

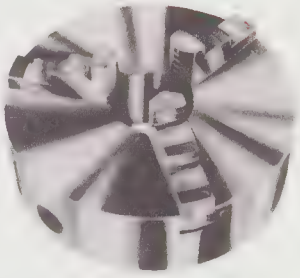
Three Jaw Self Centring: Backplate Mounting



Spec. No. 1308
Cast Iron Body, for general purpose usage.
Sizes: 3¼″, 4″, 5″, 6¼″, 8″, 10″, 12½″, 15″, 18″, 21″, 24″



Spec. No. 1301
Super Precision. Ductile Iron Body, for high speed lathes—balanced, hardened and ground scrolls—.0015″ concentricity.
Sizes: 4″, 5″, 6¼″, 8″, 10″, 12½″

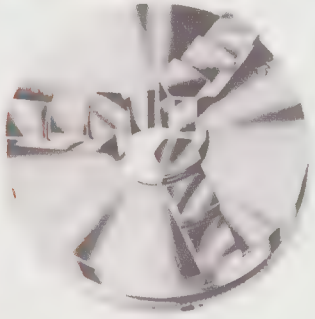


Spec. No. 1313
All Steel Body, for severe working conditions.
Sizes: 4″, 5″, 6″, 7½″, 9″, 10½″, 12″, 15″, 18″, 21″, 24″

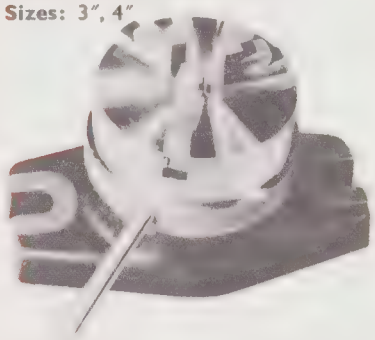
All units as above also available as four jaw centring chucks.

BURNERD: LEVER SCROLL CHUCKS

Three Jaw Self Centring: Backplate Mounting.



Spec. No. M.S.11
Lightweight Lever Scroll, for Instrument and small precision work.
Sizes: 3″, 4″

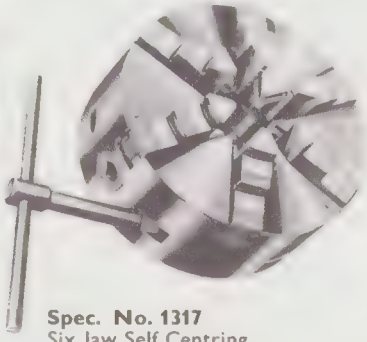


Mounted on a suitable baseplate, these chucks make a simple and inexpensive quick change workholder for many applications.

BURNERD: "GRIPTRU" CHUCKS

With micro-concentricity adjustment. The World's most accurate chuck.

Spec. No. 1316
Three Jaw Self Centring.
Sizes: 3¼″, 4″, 5″, 6¼″, 8″, 10″, 12½″



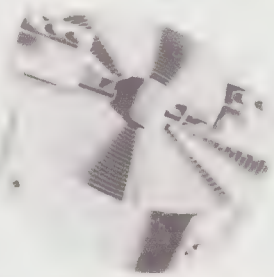
Spec. No. 1317
Six Jaw Self Centring.
Sizes: 5″, 6¼″, 8″, 10″, 12½″

All self centring chucks supplied with 2 sets (inside and outside) jaws, key, fixing bolts and mounting instructions.

BURNERD: "TUDOR" GEARED SCROLL CHUCKS

For Turret and Capstan Lathes. Ductile Iron Body—Serrated Jaws.

Spec. No. 1321
Three jaw self centring.
Sizes: 6¼″, 7½″, 9½″, 12″, 15″, 18″, 21″, 25″, 29″

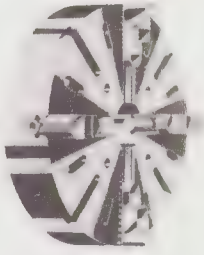


Spec. No. 1323
Two jaw self centring.
Sizes: 6¼″, 7½″, 9½″, 12″, 15″, 18″, 21″, 25″, 29″

"Tudor" Chucks supplied with 1 set of 3 serrated base and hard reversible top jaws. Soft blank top jaws available.

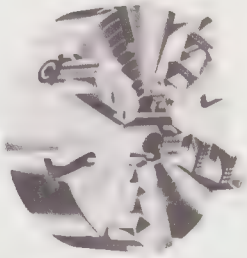
BURNERD: FOUR JAW INDEPENDENT CHUCKS — BACKPLATE MOUNTING

Spec. No. 1335
Light Duty. Cast Iron body, for smaller lathes, grinding machines, fixtures etc.
Sizes: 3¼", 4", 4½", 5", 6", 8", 10"



Spec. No. 1330
Standard Duty. Cast Iron body, for general purpose, medium speeds.
Sizes: 6", 8", 10", 12", 14", 16", 18", 20", 24", 28", 30", 36", 42"

Spec. No. 1332
High Speed. Ductile iron body, for high speed machines, virtually unbreakable.
Sizes: 6", 8", 10", 12", 14", 16", 18", 20", 24", 28", 30", 36", 42", 48"



Spec. No. 1334
All Steel. Super Duty, specially designed for Capstan and Turret Lathes—virtually unbreakable.
Sizes: 6", 8", 9", 10", 12", 15", 16", 18", 20", 22", 24", 25", 26", 32"

Direct mounting chucks for fitment to A.S.A. (American), B.S.S. (British) and D.I.N. (German) standard spindle dimensions are available on both Geared Scroll and Independent ranges.

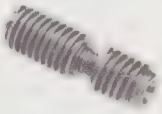
SPARE PARTS

A full range of spare parts is available for Burnerd Chucks, to ensure many years of satisfactory service.

Please give dimensional details to ensure correct supply.

PARTS FOR 4 JAW INDEPENDENT CHUCKS

Standard Hard Reversible Jaw, Style 8

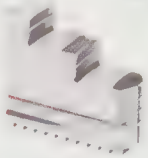


Operating Screw

Solid Soft Blank Jaw, Style 9

Thrust Bearing

PARTS FOR SELF CENTRING CHUCKS



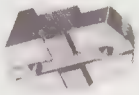
Hard Stepped Outside Jaw Style 1

Hard Stepped Inside Jaw Style 2

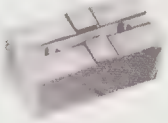
Solid Soft Blank Jaw, Style 5

Scroll

Master Base Jaw, Style 6M



Hard Reversible Top Jaw, Style 6T



Soft Blank Reversible Top Jaw, Style 7

Pinion

BURNERD: "MULTISIZE" COLLET SYSTEM

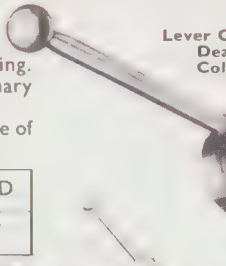
The "Multisize" Collet System is a well tried and proven method of work and toolholding. It consists of a range of Key, Lever Operated and Power Chucks utilizing a revolutionary design of collet which replaces up to 18 to 20 ordinary spring collets.
Six alternative size ranges cover all sizes from $\frac{1}{16}$" to 2½" and each collet has a stepless range of $\frac{1}{8}$". "E" type collets accommodate both round and hexagon bar.

Type:	E & M	EA & MA	EB & MB	EC & MC	ED & MD	EE & MD
Range:	$\frac{1}{16}$"–$\frac{3}{4}$"	$\frac{1}{16}$"–1"	$\frac{1}{16}$"–1¼"	$\frac{1}{16}$"–1½"	¼"–2"	½"–2½"

"M" Type Collets

"E" Type Collets

Key Operated Collet Chucks



Lever Operated Dead Length Collet Chucks

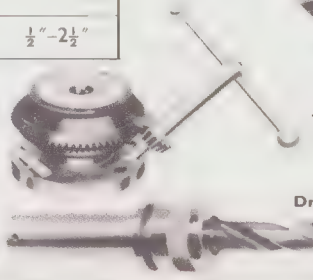


Table Mounting Collet Chucks.

Drillholders

SAMSON HAND LEVER SHEARS AND BENDERS

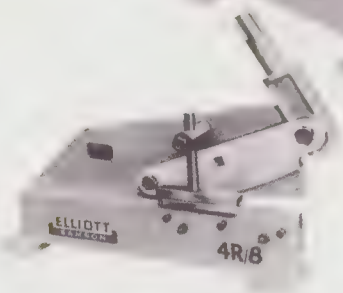
SHEET AND FLAT CUTTING

Model	3R/3	3R/4	3R/5	4R/8	5R/10
Cutting Capacity—Sheet	$\frac{1}{8}$″	$\frac{5}{32}$″	$\frac{3}{16}$″	$\frac{5}{16}$″	$\frac{3}{8}$″
—Flat Bar	$1\frac{1}{2}$″ × $\frac{5}{32}$″	$1\frac{1}{2}$″ × $\frac{3}{16}$″	$1\frac{1}{2}$″ × $\frac{1}{4}$″	$2\frac{1}{2}$″ × $\frac{3}{8}$″	2″ × $\frac{1}{2}$″
—Round	$\frac{3}{8}$″	$\frac{7}{16}$″	$\frac{1}{2}$″	$\frac{1}{2}$″	1″
—Square				$\frac{1}{2}$″	$\frac{3}{4}$″
Length of Blade, Top	$6\frac{5}{8}$″	$7\frac{5}{8}$″	$10\frac{3}{4}$″	$12\frac{1}{2}$″	
Length of Blade Bottom,	$4\frac{3}{4}$″	$5\frac{13}{16}$″	$8\frac{1}{8}$″	$8\frac{1}{2}$″	$6\frac{3}{4}$″
Weight	14 lb.	29 lb.	54 lb.	98 lb.	186 lb.

#46 #67 #89

SHEET AND SECTION CUTTING

Model	5RP/8
Cutting Capacity—Sheet	$\frac{5}{16}$″
—Round	$\frac{3}{4}$″
—Square	$\frac{3}{4}$″
—Angle	2″ × 2″ × $\frac{1}{4}$″
—Tee	2″ × 2″ × 3″ × $\frac{3}{16}$″
Length of Blade	$7\frac{1}{4}$″
Weight	245 lb.



SHEAR. CORRUGATED OR STRAIGHT BLADE

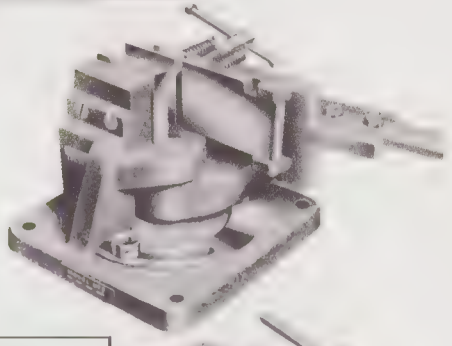
Model	2/3/355C	2/3/355
Cutting Capacity—Flat Sheet		$\frac{1}{8}$″
—Corrugated Sheet	16″ Gauge	
Length of Blade	$14\frac{1}{4}$″	$14\frac{1}{4}$″
Weight	130 lb.	130 lb.

ROD AND SECTION CUTTING

Model	50/20	50/26	13/RL/26
Cutting Capacity—Round	$\frac{3}{4}$″	1″	1″
—Square	$\frac{5}{16}$″	$\frac{7}{8}$″	$\frac{7}{8}$″
—Flat Bar	$2\frac{3}{8}$″ × $\frac{3}{8}$″	3″ × $\frac{1}{2}$″	3″ × $\frac{1}{2}$″
—Angle			2″ × 2″ × $\frac{1}{4}$″
Weight	62 lb.	100 lb.	107 lb.

COMBINED PUNCH AND SHEAR

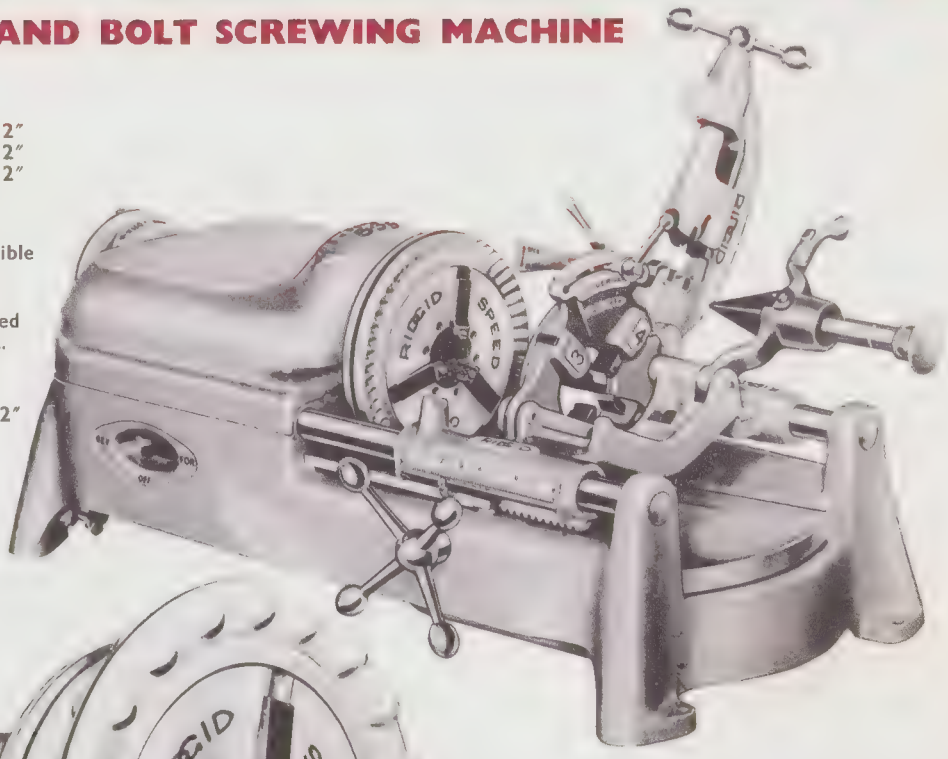
Model	30/RS	31/RP/8
Cutting Capacity—Sheet	$\frac{3}{16}$″	$\frac{5}{16}$″
—Flat Bar	3″ × $\frac{1}{4}$″	
—Round	$\frac{1}{2}$″	$\frac{3}{4}$″
—Square		$\frac{3}{4}$″
—Angle		2″ × 2″ × $\frac{1}{4}$″
—Tee		2″ × 2″ × $\frac{3}{16}$″
Punching Round Holes	$\frac{1}{4}$″ in $\frac{3}{16}$″	$\frac{1}{2}$″ in $\frac{5}{16}$″
Weight	62 lb.	225 lb.



ANGLE BENDING

Model	1 Cold	1 Hot	2 Cold	2 Hot
Capacity—Flat Bar	$3\frac{1}{8}$″ × $\frac{1}{4}$″	$3\frac{1}{8}$″ × $\frac{19}{32}$″	4″ × $\frac{9}{32}$″	4″ × $\frac{1}{2}$″
	$2\frac{3}{8}$″ × $\frac{5}{16}$″	$2\frac{9}{16}$″ × $\frac{25}{32}$″	$2\frac{3}{8}$″ × $\frac{13}{32}$″	$2\frac{1}{2}$″ × $\frac{13}{16}$″
	$1\frac{3}{16}$″ × $\frac{15}{32}$″	—	2″ × $\frac{17}{32}$″	—
—Square	$\frac{3}{4}$″	$1\frac{3}{16}$″	$\frac{7}{8}$″	$1\frac{3}{8}$″
—Round	$\frac{3}{4}$″	$1\frac{3}{16}$″	$\frac{7}{8}$″	$1\frac{3}{8}$″
—Angle	$2\frac{3}{8}$″ × $\frac{5}{16}$″	$1\frac{3}{8}$″ × $\frac{19}{32}$″	$2\frac{1}{2}$″ × $\frac{3}{8}$″	$3\frac{1}{4}$″ × $\frac{11}{16}$″
Weight	73 lb.	73 lb.	150 lb.	150 lb.

RIDGID 535 PIPE AND BOLT SCREWING MACHINE



CAPACITY

Pipe and Conduit	⅛″ to 2″
Bolts and Rod	¼″ to 2″
Driving Geared Tools	Pipe up to 12″

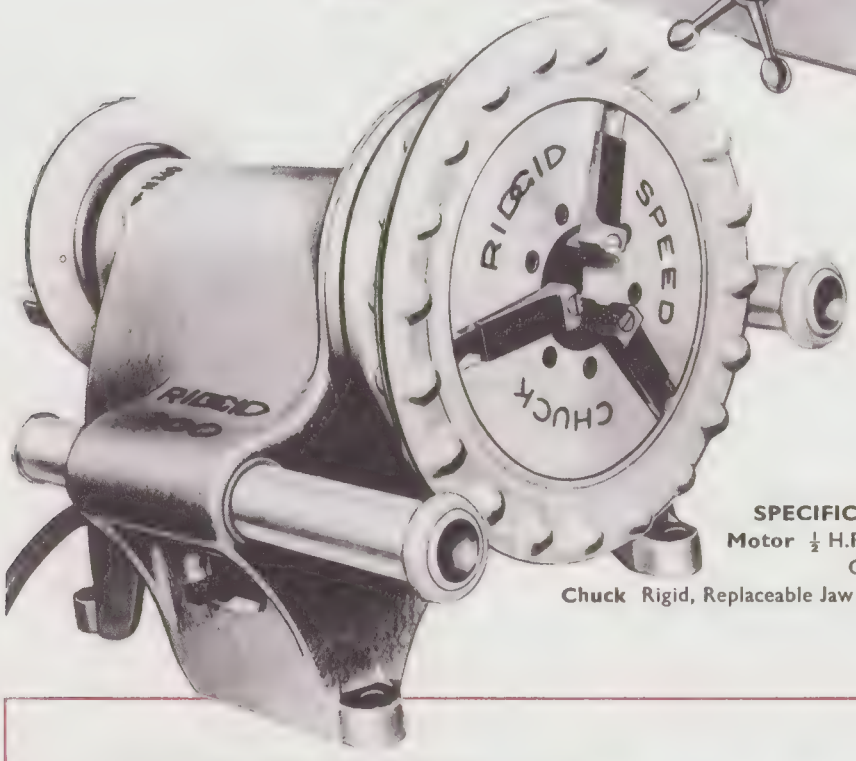
SPECIFICATIONS

Motor ½ H.P. Single Phase Reversible Universal Motor. Complete with forward and reverse Switch.

Chuck Rigid, Replaceable Jaw Speed Chuck, and rear Centering Support.

Cutter Roll type cut off with full Floating Cutter.

Reamer Five flute for sizes up to 2″



RIDGID 300 POWER DRIVE

CAPACITY

Pipe and Conduit	⅛″ to 2″
Bolts and Rod	¼″ to 2″
Driving Geared Tools	Pipe up to 12″

SPECIFICATIONS

Motor ½ H.P. Single Phase Reversible Universal Motor. Complete with forward and reverse Switch.

Chuck Rigid, Replaceable Jaw Speed Chuck, and rear Centering Support. Adjustable heavy duty tool Support Bars.

ACCESSORIES FOR 300 POWER DRIVE

Quick Opening Machine Die Head for Pipe and Bolt Threads No. 311 Carriage, holds Die Heads, Cutter, Carriage Lever and Reamer.

No. 312	Carriage Lever
No. 360	Cutter
No. 340	Reamer
No. 1206	Stand
No. 1452	Clip-on Tool Tray
No. 19	Nipple Chuck

"JIFFY" COMBINATION CUTTER BENDER

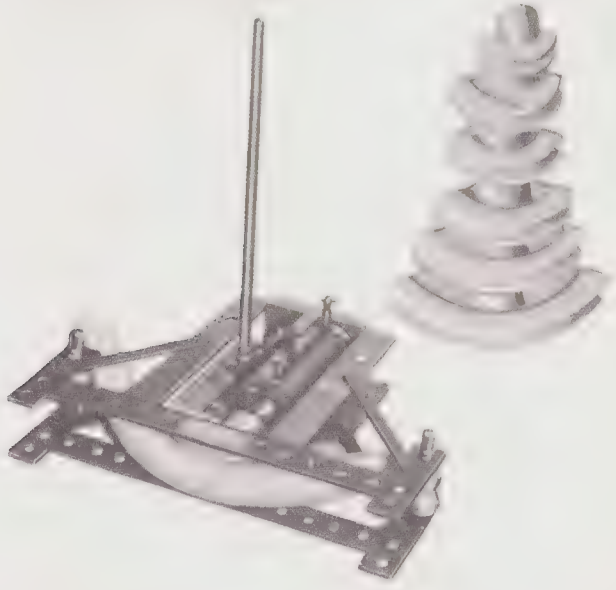
Capacity ¾" Diameter Mild Steel.

JOPLIN HYDRAULIC PIPE BENDER

2" Machine, suitable for Pipe ⅜" to 2"
4" Machine, suitable for Pipe ⅜" to 4"

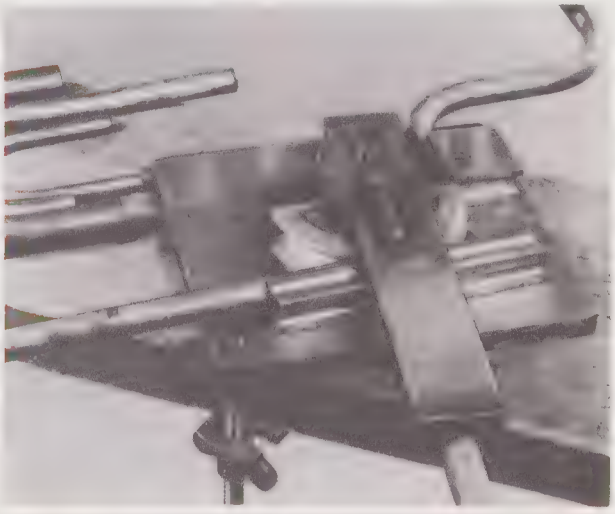
JOPLIN PLUMBER'S MATE

1¼" Machine, suitable for Pipe ½" to 1¼"
2" Machine, suitable for Pipe ½" to 2"



TRU-BEND COPPER TUBE BENDER

O.D. of Tube	Minimum Radius of Bend
⅜"	1½"
½"	1½"
⅝"	2 1/16"
¾"	2⅜"
1"	3½"



BLACK HAWK – ENERPAC PIPE BENDERS

Model	Pipe Size
S34	1¼", 1½", 2" Thin Wall Conduit
S30A	½", ¾", 1", 1¼", 1½", 2" Pipe
S36	1¼", 1½", 2", 2½", 3", 3½", 4" Pipe
S316	½", ¾", 1", 1¼", 1½", 2" Pipe

BLACKHAWK — ENERPAC

HYDRAULIC PUMP AND CYLINDER SETS

Rated Capacity	Length of Stroke	Cylinder Collapsed Height	Set Model
4 tons	5″	9¾″	S150
10 tons	2¼″	4⅝″	S177
10 tons	6″	11¾″	S171
10 tons	10″	15 7/16″	S172
20 tons	5 1/16″	11 5/16″	S178
20 tons	13½″	20¼″	S179
30 tons	2 7/16″	4½″	SL30
50 tons	2⅜″	4¾″	SL50
50 tons	6″	11″	S180
50 tons	13″	25″	S183
100 tons	2¼″	5½″	SL100
100 tons	6½″	16⅞″	S282
100 tons	13″	25⅛″	S283

CYLINDERS — GENERAL PURPOSE SINGLE ACTING

	Short Stroke			Medium Stroke			Long Stroke		
Rated Capacity	Length of Stroke	Collapsed Height	Model	Length of Stroke	Collapsed Height	Model	Length of Stroke	Collapsed Height	Model
2 tons	3″	4 7/8″	RC120	5″	9 3/16″	RC119 *			
4 tons	⅝″	1 5/8″	RC4	5″	9¾″	RC140			
10 tons	2¼″	4⅝″	RC11	6″	11¾″	RC156	10″	15 13/16″	RC166
20 tons				5 1/16″	11 5/16″	RC251	13½″	20¼″	RC224
20 tons				8″	13 11/16″	RC255			
30 tons	2 7/16″	4½″	RLC30						
50 tons	2⅜″	4¾″	RLC50	6″	11″	RC210	13″	25″	RC252
100 tons	2¼″	5½″	RLC100	6½″	16⅛″	RC351	13″	25⅛″	RC352

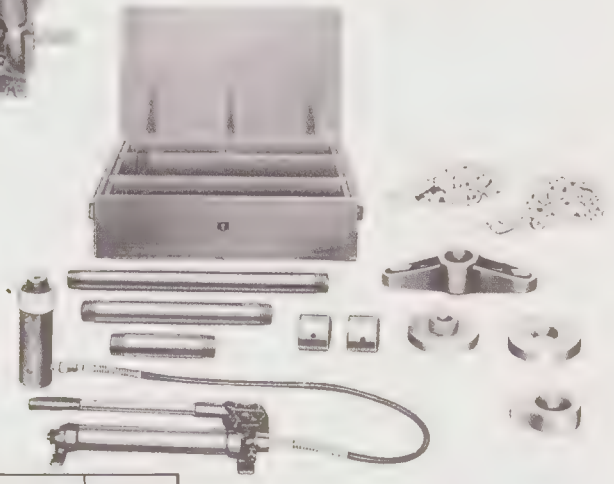
*Pull Type

Hollow Push or Pull units with Rated Capacity 10 Ton, 12 Ton, 20 Ton, 30 Ton and 60 Ton are available.

HAND OPERATED PUMPS

Model	Pressure Rating PSI	Weight
P14	8,650	5¾ lb.
P39	10,000	12¾ lb.
P80	10,000	26½ lb.
P85	10,000	37½ lb.
P462	10,000	52 lb.

Electric or Air Operated Pumps are available.



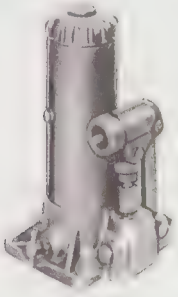
HYDRAULIC TOOL SETS — for Maintenance or Rescue Work

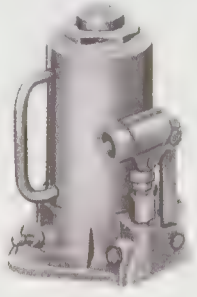
Model	MZ4	MZ31	MZ210	MZ15	MZ25	MZ37	MZ79
Capacity	4 tons	10 tons	10 tons	20 tons	20 tons	20 tons	20 tons

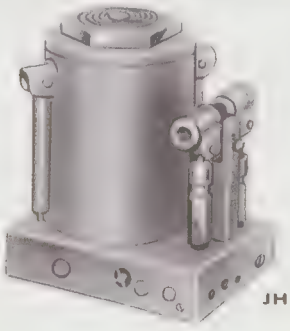
Complete Specifications are contained in the BLACKHAWK — ENERPAC Catalogue, available on application.

BLACKHAWK – ENERPAC HYDRAULIC HAND JACKS

Model	Jack Capacity	Stroke	Collapsed Height	Screw Extension	Weight
JH 1.5	1½ tons	5 3/16″	7″	2 1/16″	8¾ lb.
JHL 1.5	1½ tons	19″	21 13/16″	—	13½ lb.
JH 3	3 tons	5⅞″	8½″	3⅜″	13½ lb.
JH 5	5 tons	6¼″	9″	4½″	17¼ lb.
JH 8	8 tons	6¼″	9″	4½″	19¾ lb.
JH 12	12 tons	5⅛″	8½″	3½″	26 lb.
JH 20	20 tons	6½″	11″	—	38½ lb.
JH 202	20 tons	22½″	27″	—	132 lb.
JH 30	30 tons	6¼″	11″	—	65 lb.
JH 50	50 tons	7″	12″	—	124 lb.
JH 100	100 tons	6⅛″	12″	—	225 lb.


JH 3


JH 12


JH 50

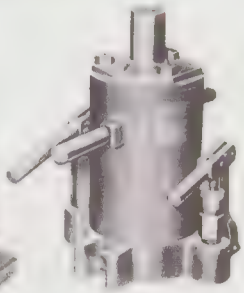
JHL 1·5

JH 202

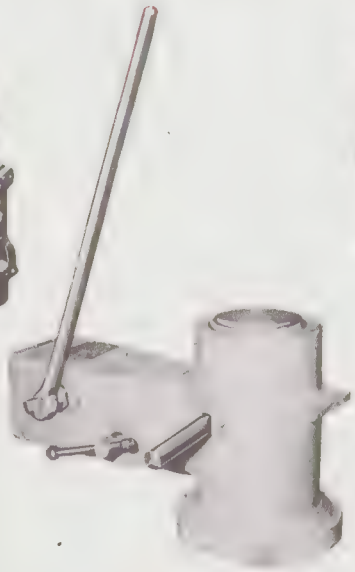
JOPLIN HYDRAULIC JACKS

J 146

J 166


J 167 and J 168

Model	Jack Capacity	Stroke	Collapsed Height	Weight
J 146	2 tons	5″	7″	9 lb.
J 148	3 tons	6″	9″	10 lb.
J 166	5 tons	6¼″	9″	19 lb.
J 149	7 tons	6¼″	9″	20 lb.
J 150	10 tons	6″	10″	28 lb.
J 163	12 tons	6″	10¼″	46 lb.
J 167	20 tons	8″	12″	103 lb.
J 168	30 tons	10″	14″	132 lb.



SHIPYARD JACKS
25, 50, 100, 150, 200, 300 tons.

HEAD AND TOE LIFT JACKS
15, 25 and 40 tons Capacity.

NIKE HYDRAULIC JACKS

Model	Jack Capacity	Stroke	Screw Extension	Collapsed Height	Weight
13 EHD	1½ tons	3 13/16″	2⅛″	6 1/16″	5½ lb.
13 HD	1½ tons	5″	2⅛″	7⅛″	6 lb.
15 HD	3 tons	5 13/16″	3¾″	8 7/16″	8 lb.
17 HD	5 tons	5 21/32″	4¼″	8⅜″	12½ lb.
18 HD	8 tons	6″	4⅛″	8 11/16″	15 lb.
19 HD	10 tons	6″	4⅛″	8 11/16″	15½ lb.
20 HD	12 tons	5¾″	3⅜″	8 15/16″	23 lb.
21 HD	15 tons	5¾″	3⅜″	8 15/16″	23 lb.
42 HD	20 tons	4 9/16″	4½″	9 9/16″	37 lb.
43 HD	30 tons	5 19/32″	4 3/32″	10 5/16″	57 lb.
44 HB	40 tons	6 17/32″	—	11 1/32″	89 lb.
82 H	50 tons	5 15/16″	—	11 7/32″	127 lb.
86 H	100 tons	5 29/32″	—	12 1/32″	209 lb.
82 HS	50 tons	5 15/16″	—	13″	150 lb.
86 HS	100 tons	5 29/32″	—	15 1/16″	238 lb.

RACK AND PINION JACKS

GEHORE

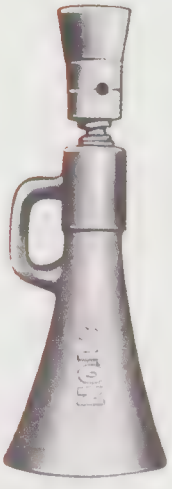
ALL STEEL CONSTRUCTION

Capacity	3 Ton	7 Ton	10 Ton
Height	28½″	31½″	31½″
Rise	14″	15″	15″
Toe Height	2½″	3″	3″
Weight	44 lb.	55 lb.	92 lb.

TREWHELLA

Model	Capacity	Collapsed Height	Lift	Weight
132	3 tons	29½″	17″	50 lb.
135	6 tons	32″	17″	66 lb.
138	10 tons	33¼″	14¾″	119 lb.

DAWN SCREW JACKS



LOW LIFT

BROAD BASE

Size	3 Ton	6 Ton
Min. Height	9½″	9½″
Max. Height	13½″	13½″
Dia. of Screw	1¾″	2″
Dia. of Base	7″	8½″
Weight	19 lb.	30 lb.

HIGH LIFT

NARROW BASE

Size	1 Ton	3 Ton	5 Ton	10 Ton
Min. Height	9″	15″	20″	24″
Max. Height	13″	24″	29″	36″
Dia. of Screw	1⅛″	1⅝″	1¾″	2″
Dia. of Base	4½″	7″	7″	7″
Weight	8¼ lb.	27 lb.	39 lb.	56 lb.

STARRETT HOLE SAWS — High Speed Welding Edge

Saw No.	Diameter	Saw No.	Diameter	Saw No.	Diameter
H0096	9/16″	H0158	1 5/8″	H0318	3 1/8″
H0058	5/8″	H1116	1 11/16″	H0314	3 1/4″
H1016	11/16″	H0134	1 3/4″	H0338	3 3/8″
H0034	3/4″	H1136	1 13/16″	H0312	3 1/2″
H1036	13/16″	H0178	1 7/8″	H0358	3 5/8″
H0078	7/8″	H0200	2″	H0334	3 3/4″
H1056	15/16″	H0216	2 1/16″	H0378	3 7/8″
H0100	1″	H0218	2 1/8″	H0400	4″
H0116	1 1/16″	H0214	2 1/4″	H0418	4 1/8″
H0118	1 1/8″	H0256	2 5/16″	H0414	4 1/4″
H0136	1 3/16″	H0238	2 3/8″	H0438	4 3/8″
H0114	1 1/4″	H0212	2 1/2″	H0412	4 1/2″
H0156	1 5/16″	H0296	2 9/16″	H0434	4 3/4″
H0138	1 3/8″	H0258	2 5/8″	H0500	5″
H0176	1 7/16″	H0234	2 3/4″	H0512	5 1/2″
H0112	1 1/2″	H0278	2 7/8″	H0600	6″
H0196	1 9/16″	H0300	3″	—	—

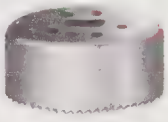
Hole Saws supplied without Arbors unless specified.

ARBORS — With High Speed Pilot Drill

Arbor Number	For Chuck Size	Fits Hole Saws
A1	1/2″	H0096 to H0136
A2	1/2″	H0114 to H0600
A3	3/4″	H0114 to H0600
A4	1/4″	H0096 to H0136
A5	1/2″	12″ Extension for: A1 and A2 Arbors
A6	1/2″	H0014 to H0112
A014D		Extra High Speed 1/4″ Pilot Drills

BLACK & DECKER HOLE SAWS

Available in 3 types, up to 4″



SAW

MANDREL AND PILOT DRILL COMPLETE

COARSE TOOTH HOLE SAWS

Saw Outside Diameter	Saw No.	Requires Mandrel No.	
		Drills 1/4″ to 3/8″	Drills 1/2″ and lgr.
3/4″	14906	22181	14903
7/8″	14908	22181	14903
1″	14910	22181	14903
1 1/8″	14912	22181	14903
1 1/4″	14911	22182	14904
1 1/2″	14914	22182	14904
2″	14918		18028
2 1/4″	14922		18028
2 1/2″	14923		18028

HIGH SPEED SUPER FINE TOOTH HOLE SAWS

Saw Outside Diameter	Saw No.	Requires Mandrel No.	
		Drills 1/4″ to 3/8″	Drills 1/2″ and lgr.
3/4″	21747	22181	14903
7/8″	21748	22181	14903
15/16″	21749	22181	14903
1″	21771	22181	14903
1 1/8″	21772	22181	14903
1 1/4″	21781	22182	14904
1 1/2″	21783	22182	14904
1 3/4″	21785		14904
2″	21787		18028
2 1/16″	21788		18028
3 1/4″	21798		18028

FINE TOOTH HOLE SAWS

Saw Outside Diameter	Saw No.	Requires Mandrel No.	
		Drills 1/4″ to 3/8″	Drills 1/2″ and lgr.
5/8″	23051	(Has built-in Mandrel)	
3/4″	16882	22181	14903
7/8″	16883	22181	14903
15/16″	21382	22181	14903
1″	16884	22181	14903
1 1/16″	21875	22181	14903
1 1/8″	16885	22181	14903
1 3/16″	17678	22181	14903
1 1/4″	16886	22182	14904
1 5/16″	21383	22182	14904
1 3/8″	16887	22182	14904
1 1/2″	16888	22182	14904
1 5/8″	16889		14904
1 11/16″	21384		14904
1 3/4″	16890		14904
1 7/8″	16891		14904
1 15/16″	21385		14904
2″	16892		18028
2 1/8″	16894		18028
2 1/4″	16895		18028
2 1/2″	16897		18028
2 5/8″	16898		18028
2 3/4″	16899		18028
3″	16901		18028
3 1/2″	16904		18028
4″	16905		18028

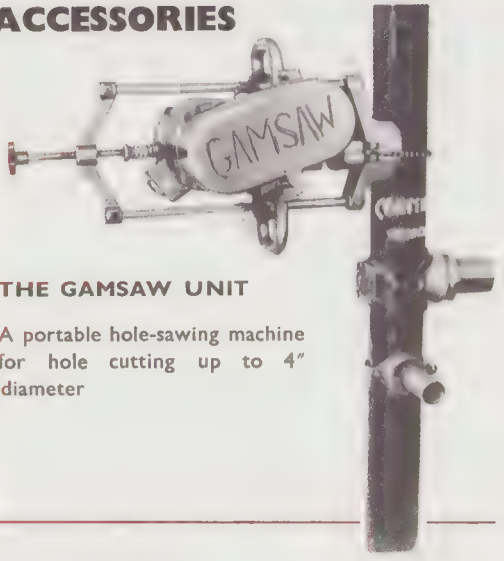
REPLACEMENT PILOT DRILLS

No. 14935 — 1/4″ Replacement Pilot Drill for 14903 Mandrel
1/4″ Replacement Pilot Drill for 14904 Mandrel
1/4″ Replacement Pilot Drill for 18028 Mandrel
No. 22192 — 1/4″ Replacement Pilot Drill for 22181 Mandrel
1/4″ Replacement Pilot Drill for 22182 Mandrel
No. 23050 — 3/16″ Replacement Pilot Drill for 23051 Mandrel

GAMMA STANDARD HOLE SAWS AND ACCESSORIES

Saw Size	Stnd. Shank
$\frac{5}{8}$", $\frac{11}{16}$", $\frac{3}{4}$", $\frac{7}{8}$", 1", $1\frac{1}{8}$"	$\frac{1}{4}$"
$1\frac{1}{4}$", $1\frac{3}{8}$", $1\frac{1}{2}$", $1\frac{3}{4}$", 2"	$\frac{3}{8}$"
$2\frac{1}{4}$", $2\frac{1}{2}$" $2\frac{3}{4}$", 3", $3\frac{1}{2}$", 4"	$\frac{1}{2}$"

Saw blades available: (12 tpi) Fine, (8 tpi) Medium, (6 tpi) Coarse



THE GAMSAW UNIT

A portable hole-sawing machine for hole cutting up to 4" diameter

GAMMA STANDARD HOLE SAW CHUCKS WITH No 6 JACOBS TAPER

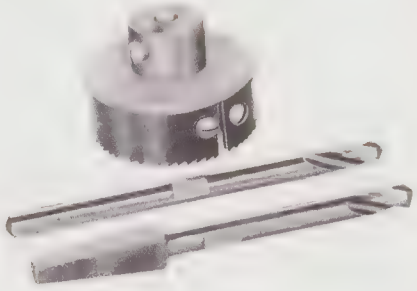
Saw Size	2", $2\frac{1}{4}$", $2\frac{1}{2}$", $2\frac{3}{4}$", 3", $3\frac{1}{2}$", 4"
Arbor	$\frac{3}{8}$" St. Shank or No. 1 or No. 2 Morse
Saw Size	$4\frac{1}{2}$", 5", $5\frac{1}{2}$", 6", 7", 8", 9", 10"
Arbor	$\frac{1}{2}$" St. Shank or No. 2 Morse Taper

THE GAMMA SILVER KNIGHT with Standard Shanks

Five in one hole saw, Sizes: 1", $1\frac{1}{4}$", $1\frac{1}{2}$", $1\frac{3}{4}$", 2"; depth of cut $\frac{3}{4}$"

CONSOL HOLE SAWS AND PILOT DRILLS

Saw No.	Diam.	Saw No.	Diam.
07	$\frac{5}{8}$"	8C	$1\frac{5}{8}$"
06	$\frac{21}{32}$"	9	$1\frac{11}{16}$"
03	$\frac{3}{4}$"	10	$1\frac{3}{4}$"
0	$\frac{27}{32}$"	12	$1\frac{7}{8}$"
0A	$\frac{7}{8}$"	14	2"
1	$\frac{15}{16}$"	17	$2\frac{1}{4}$"
2	1"	18	$2\frac{3}{8}$"
3	$1\frac{1}{32}$"	20	$2\frac{1}{2}$"
3B	$1\frac{1}{8}$"	21	$2\frac{5}{8}$"
5	$1\frac{1}{4}$"	22	$2\frac{3}{4}$"
6	$1\frac{5}{16}$"	24	3"
6B	$1\frac{3}{8}$"	25	$3\frac{1}{4}$"
7	$1\frac{1}{2}$"	26	$3\frac{1}{2}$"
8A	$1\frac{9}{16}$"	—	—



PILOT DRILLS

Shank Diam.	For use with Saw Number:
$\frac{1}{4}$"	No. 07 — No. 12
$\frac{5}{16}$"	No. 14 — No. 20
$\frac{3}{8}$"	No. 21 — No. 26

JOHN HEINE

PRESS TOOL ACCESSORIES

A complete range of John Heine Press Tool Accessories is now available from stock.

Series 80R Rear Pillar Die Sets
Die Area 3" x 3" to 22" x 14"

STEEL WIRE WHEEL BRUSHES

L520 CRIMPED STEEL WIRE — WIDE FACE

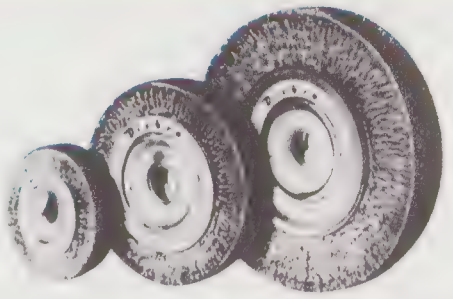
Diameter	Width	Bore	Wire Gauge
2″	1″	½″	33
2″	½″	½″	33
2½″	1″	½″	33
2½″	½″	½″	33
3″	1″	½″	33
3″	⅝″	½″	33
4″	1″	½″ or ⅝″	33
4″	½″	½″ or ⅝″	33
4″	¼″	½″ or ⅝″	33
5″	1″	½″ or ⅝″	33
5″	½″	½″ or ⅝″	33
5″	¼″	½″ or ⅝″	33
6″	1″	½″ or ⅝″	31
6″	½″	½″ or ⅝″	31
6″	¼″	½″ or ⅝″	31
6″	1½″	½″ or ⅝″	31
6″	2″	½″ or ⅝″	31
8″	1″	½″ or ⅝″	29–31
8″	¼″	½″ or ⅝″	29–31
8″	1½″	½″ or ⅝″	29–31
8″	2″	½″ or ⅝″	29–31
10″	1″	1″ or 1¼″	29–27
10″	¼″	1″ or 1¼″	29–27
10″	1½″	1″ or 1¼″	29–27
10″	2″	1″ or 1¼″	29–27
12″	1″	1″ or 1¼″	29–27
12″	1½″	1″ or 1¼″	29–27
12″	2″	1″ or 1¼″	29–27
12″	3″	1″ or 1¼″	29–27
12″	4″	1″ or 1¼″	29–27
14″	1″	1″ or 1¼″	29–27
14″	1½″	1″ or 1¼″	29–27
14″	2″	1″ or 1¼″	29–27

L523 SECTIONS Large Bore
Single Sections for Multiple Mounting

Diameter	Width	Bore	Wire Gauge
6″	½″	2″	33 31
8″	½″	2½″	33–31
10″	½″	4½″	33–31
12″	½″	4½″	31–29
14″	⅜″	4½″	31–29
15″	⅜″	4½″	31–29
18″	⅜″	6″	31–29

L525 TWISTKNOT STEEL WIRE BRUSHES SOLID

Diameter	Width	Bore	Wire Gauge
4″	½″	½″	30
4″	½″	⅜″	30
6″	½″	½″ or ⅜″	30
6″	1″	½″ or ⅜″	30
6″	⅜″	½″ or ⅜″	26
6″	1″	½″ or ⅜″	26
8″	⅜″	⅜″ or 1″	30
8″	1″	⅜″ or 1″	30
8″	⅜″	⅜″ or 1″	26
8″	1″	⅜″ or 1″	26
10″	⅜″	1″ or 1¼″	30
10″	1″	1″ or 1¼″	30
10″	⅜″	1″ or 1¼″	26
10″	1″	1″ or 1¼″	26
12″	¼″	1″ or 1¼″	30
12″	1½″	1″ or 1¼″	30
12″	¼″	1″ or 1¼″	26
12″	1½″	1″ or 1¼″	26
12″	2″	1″ or 1¼″	26



Metal Centre Standard — Wood Centres can be supplied for widths over 1″. Also available — Brass, Stainless Steel, Phosphor Bronze, Nickel, Silver Wire.

L521 CRIMPED STEEL WIRE— NARROW FACE

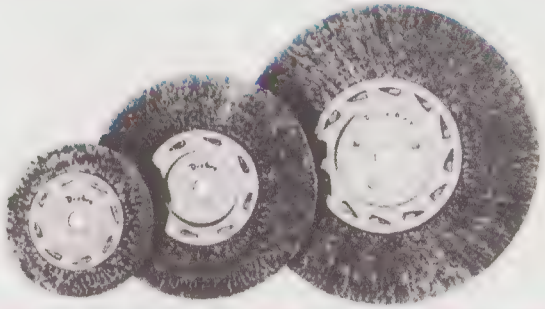
Diameter	Width	Bore	Wire Gauge
3″	⅜″	½″ or ⅝″	33
4″	½″	½″ or ¾″	33
5″	½″	½″ or 1″	33
6″	½″	½″ or 1½″	31
8″	½″	¾″ or 2″	31
10″	½″	¾″ or 2″	29
12″	¾″	1″ or 2″	29
15″	¾″	1″ or 2″	29

L522 CRIMPED STEEL WIRE — NARROW FACE — EXTRA HEAVY DUTY

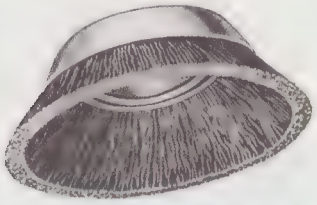
Diameter	Width	Bore	Wire Gauge
6″	½″	½″ or 1½″	24, 22, 20
8″	⅝″	⅝″ or 2″	24, 22, 20
8″	½″	¾″ or 2″	24, 22, 20
10″	—	1″ or 2½″	24, 22, 20
12″	—	1″ or 3″	24, 22, 20

L524 CRIMPED STEEL WIRE — SMALL DIAMETER — NARROW FACE

Diameter	Width	Bore	Wire Gauge
1″	¼″	⅜″	36
1½″	¼″	⅜″	36
2″	¼″	½″ or ⅜″	33
2½″	⅜″	½″ or ⅜″	33
3″	⅜″	½″ or ⅜″	33
3½″	⅜″	1″	33
4″	⅜″	1″	33



STEEL WIRE CUP BRUSHES



L526

CRIMPED WIRE – SPLAYED CUP SHAPE

Maximum Speed 4000 r.p.m.

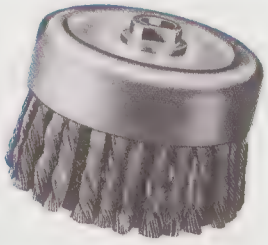
Also available in Stainless Steel or Phosphor Bronze

Model	Diameter	Spindle	Bore	Wire Gauge
151	2¼″	¼″ x 1″		33
152	3″	¼″ x 1″		33
153	3½″		⅜″ Whit. or Plain	30
154	4″		14 x 2 mm	25
155	5″		½″ B.S.F.	25

L527

TWISTKNOT STRAIGHT CUP SHAPE – HEAVY DUTY

Maximum Speed 4500 r.p.m.



Model	Diameter	Rows	Bore	Wire Gauge
156	4″	1	⅜″ Whit.	30 26
156a	4″	2	⅜″ Plain	
157	5″	1	14 x 2 mm	30 26
157a	5″	2	½″ B.S.F.	
161	5″	1		24 20
162	5″	2		

L528

TWISTKNOT STRAIGHT CUP SHAPE DETACHABLE SKIRT

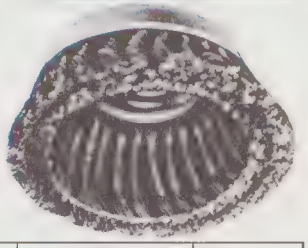
Maximum Speed up to 9000 r.p.m.

Model	Diameter	Rows	Bore	Wire Gauge
159N	4″	1	⅜″ Whit.	20
160N	4″	2	⅜″ Plain 14 x 2 mm ½″ B.S.F.	20

L529

TWISTKNOT – SPLAYED CUP SHAPE – EXTRA HEAVY DUTY

Maximum Speed up to 4500 r.p.m.



Model	Diameter	Rows	Bore	Wire Gauge
165	5½″	2	⅜″ Whit. ⅜″ Plain 14 x 2 mm ½″ B.S.F. ⅝″ 11 T.P.I.	20

L530

HOLE AND RECESS CLEANING BRUSHES

Model	Diameter	Head Length	Spindle Length	Wire Gauge
500	¼″	1″	1½″	41
501	⅜″	1″	1½″	39
502	½″	1″	1½″	39
503	⅝″	1″	1½″	39
504	¾″	1″	1½″	39
505	1″	1″	1½″	39

L531

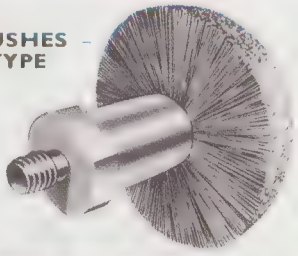
ROTARY TUBE CLEANING BRUSHES – TURKS HEAD TYPE

For use with flexible shaft equipment

$\frac{7}{16}$″ Whitworth Thread

Diameters:

$\frac{7}{8}$″, 1″, 1⅛″, 1¼″, 1⅜″, 1½″, 1⅝″, 1¾″, 1⅞″, 2″, 2⅛″, 2¼″, 2⅜″, 2½″, 2⅝″, 2¾″, 2⅞″, 3″, 3¼″, 3½″, 4″



L532

CONDENSER TUBE BRUSHES

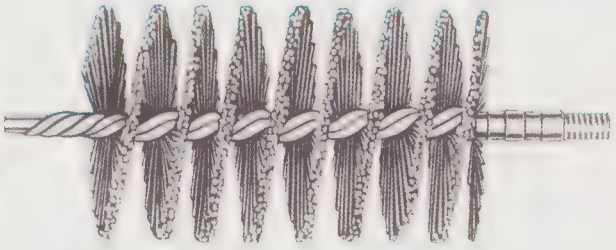
Straight Steel Wire or Crimped Brasswire

$\frac{3}{16}$″ Whitworth Thread Connection

Diameters ¼″, $\frac{17}{16}$″, ⅜″, $\frac{9}{16}$″, ½″

¼″ Whitworth Thread Connection

Diameters $\frac{7}{16}$″ and ⅜″



L533

BOILER TUBE BRUSHES

Standard fill: straight steel wire

¼″ Whitworth Thread Connection

Diameters:

6″, 5″, 4″, 3¾″, 3½″, 3¼″, 3″, 2⅞″, 2¾″, 2½″, 2⅜″, 2¼″, 2⅛″, 2″, 1⅞″, 1¾″, 1⅝″, 1½″, 1⅜″, 1¼″, 1⅛″, 1″

Double Spiral Tube Brushes 1″ to 6″ diameter can be supplied

VALVE GUIDE BRUSHES

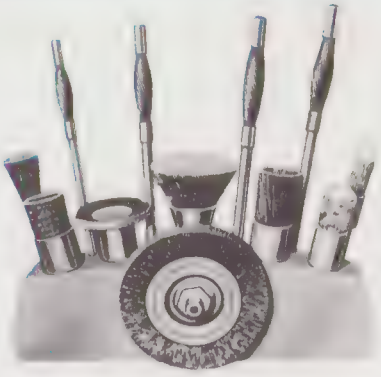
Brush No.	Cup or Head Diam.
226	$\frac{1}{4}$"
227	$\frac{5}{16}$"
228	$\frac{3}{8}$"
229	$\frac{7}{16}$"

DECARBONISING UTILITY SET No. 254

Holding 6 Brushes
Brush No. 151
204
210
234

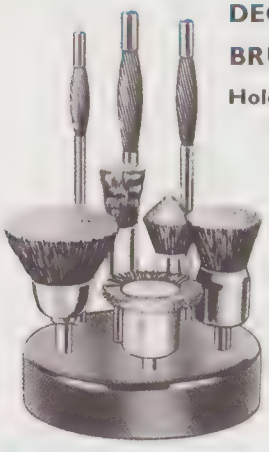
DECARBONISING BRUSH SET No. 250

Holding 12 brushes and 1 arbor in metal box.
Brush Nos. 100, 151, 202, 204, 207, 208, 210, 226, 227, 228, 229, 234



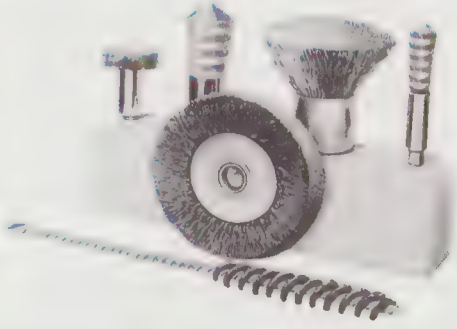
DECARBONISING UTILITY SET No. 251

Holding 12 brushes and 1 arbor on wooden stand.
Brush Nos. 100, 151, 202, 204, 207, 208, 210, 226, 227, 228, 229, 234



DECARBONISING BRUSH SET No. 252

Holding 8 Brushes
Brush No. 151
202
204
208
226
227
228
234

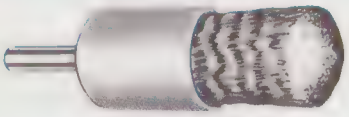


DECARBONISING UTILITY SET No. 260

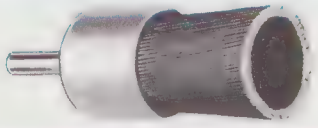
Consisting of six tough hardwearing brushes.
Brush Nos. 61, 62, 63, 64, 65, 66

DECARBONISING BRUSHES

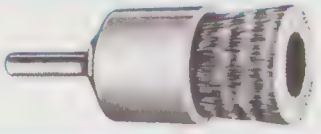
Brush No.	Diameter Wire	Diameter Cup	Length of Wire from Cup or Holder	Spindle or Shank	Standard Wire Gauge
FLAT END					
200	5/16″	3/8″	1″	1½″ × 6 mm	25 or 33
201	3/8″	7/16″	1″	1½″ × 6 mm	25 or 33
202	7/16″	1/2″	1″	1½″ × 6 mm	25 or 33
203	3/4″	7/8″	1″	1″ × 6 mm	25 or 33
204	1″	1⅛″	1″	1″ × 6 mm	25 or 33



POINTED END					
205	5/16″	3/8″	1″	1½″ × 6 mm	25 or 33
206	3/8″	7/16″	1″	1½″ × 6 mm	25 or 33
207	7/16″	1/2″	1″	1″ × 6 mm	25 or 33
208	3/4″	7/8″	1¼″	1″ × 6 mm	25 or 33
209	1″	1⅛″	1½″	1″ × 6 mm	25 or 33



HOLLOW CUP					
210	1½″	1⅛″	1½″	1″ × 6 mm	20 Straight



SEMI-HOLLOW CUP					
211	1⅛″	1⅛″	1″	1″ × 6 mm	25 Crimped

VALVE SEAT EXPANDING					
212	1⅜″	1⅛″	1¼″	1″ × 6 mm	25 Crimped

LONG PENCIL TYPE. FLAT END					
219	5/16″	3/8″	1″	2″ × 6 mm	25 Crimped
220	5/16″	3/8″	1″	5″ × 6 mm	25 Crimped

LONG PENCIL TYPE. POINTED END					
221	5/16″	3/8″	1⅛″	2″ × 6 mm	25 Crimped
222	5/16″	3/8″	1⅛″	5″ × 6 mm	25 Crimped

Special sizes can be supplied

Brush No.	Cup or Head Diam.	Brushing Face	Spindle or Shank	S.W.G.
SPLAYED TYPE				
230	3/4″	3/16″	1½″ × 6 mm	25 or 30
231	1″	1/4″	1″ × 6 mm	25 or 30
232	1¼″	1/4″	1″ × 6 mm	25 or 30
233	1½″	1/4″	1″ × 6 mm	25 or 30
234	2″	1/4″	1″ × 6 mm	25 or 30
ROTARY MOUNTED TYPE				
235	2″	3/4″	1½″ × 6 mm	30
236	2″	1″	1½″ × 6 mm	30

BUCKETS, MOPS, BROOMS, BRUSHES

L534 **BUCKETS, GALVANISED,** Rimmed Edge, 2, 2½, 3, 4, 5 gallon

L535 **BUCKETS, MOP WRINGER TYPE** Brass Rollers

L536 **BUCKETS, PLASTIC** 2 gallon

L537 **WATERING CANS,** Galvanised, with Screw on Rose, 1½, 3 gallon

L538 **GARBAGE BINS,** Galvanised, with Lids, 7½ to 17 gal. capacity

L539 **GARBAGE BINS, PLASTIC** with Lids, 10 to 16 gal. Capacity

L540 **COTTON MOPS** Heads only, 14 oz., 20 oz.

L541 **"SABCO" SQUEEZE MOP** with replaceable Foam Head

L542 **RUBBER SQUEEGEES** Wood Frame, 18", 20", 30" wide

L543 **DUST PANS** Metal, Enamel Finish

L544 **COIR DOOR MATS** 27" x 16", 30" x 18"

L545 **COIR MATTING** in Rolls 27" wide

BROOMS

L546 **BROOMS,** Bass, Cane Fronted, 12", 14", 16", 18", 20", 24"

L547 **BASSINE** 12", 14", 16", 18", 20", 24"

L548 **BASSINE DECK,** 13" x 5"

L549 **JANITORS HAIR MIX** 12", 14", 24", 30", 36"

L550 **HOUSEHOLD HAIR-FIBRE** 12", 14", 24", 36"

L551 **HOUSEHOLD NYLON BRISTLE,** 15"

L552 **HOUSEHOLD MILLET,** 7 Tie

L553 **STEELWIRE,** 10", 12"

L554 **MILLET WHISKS,** 7"

L555 **LATHE WHISKS,** 6"

L556 **SCRUBBING BRUSHES, HAND,** Single Wing Fibre, 10"

L557 **FIBRE DECK,** 10"

L558 **FIBRE SANITARY** Bent Wooden Handle

L559 **SWABBING,** Bolted Head, 1½", 2" Diam. Head, 24" 48" Handle

BRUSHES

L560 **BANNISTER,** Hair or Fibre, 10"

L561 **GAUGE GLASS,** ¼", ½", ¾", 1"

L562 **PAINT BRUSHES, FLAT** Straight Handle (3 qualities), Tradesman, Workshop or Handyman, ½", 1", 1½", 2", 2½", 3" 3½", 4" wide

Bent Handle 1", 1½", 2" wide Oval, Various Sizes

L563 **STENCIL,** Round, Nos. 2, 4, 6, 8, 10, 12

L564 **FITCHES,** Round Lining, Nos. 4, 6, 8, 10, 12

L565 **SASH TOOLS,** ½", ¾", 1", 1¼", 1½"

L566 **BOOK BINDERS,** Glue, Round, 1½", 2¼"

CLEANING AIDS, CREAMS, LIQUIDS, SOAPS

L567 **SPONGE CLOTHS** (Sweat Rags), 1 doz. lots

L568 **COTTON WASTE, No. 1 WHITE,** 56 lb. Bag

L569 **COTTON WASTE, No. 1, COLOURED,** 56 lb. Bag

L570 **SCOURED RAGS, ALL COTTON,** White or Coloured, 56 lb. Bag

L571 **SCOURED RAGS, SILK & COTTON MIXTURE,** 56 lb. Bag

L572 **STOCKINGETTE** (Cheese Cloth), 10 lb. Roll

L573 **CALCIUM CHLORIDE** 140 lb. Drum

L574 **CARBON TETRACHLORIDE** 1 gal. Tin, 4 gal. Drum

L575 **CAUSTIC SODA** 1, 2, 7, 28 lb. Tin

L576 **COLYSOL WX GREASE REMOVER,** 56 lb. Pkt.

L577 **DRYSAL LIQUID & GREASE ABSORBENT MINERAL,** 50 lb. Bag

L578 **EUCALYPTUS DISINFECTANT,** 5 gal. Drum

L579 **KEROSINE** 1 gal. Tin, 5 gal. Drum

L580 **METHYLATED SPIRITS** 1 gal. Tin, 5 gal. Drum

L581 **MINERAL TURPS** 1 gal. Tin, 5 gal. Drum

L582 **PINE DISINFECTANT** 4 gal. Drum

L583 **PHENOL** 1 gal. Tin, 4 gal. Drum

L584 **MORTEIN INSECT REPELLENT,** 1 gal. Tin

L585 **AJAX CLEANING POWDER** 18 oz. Tin, 70 lb. Drum

L586 **BON AMI** 8 oz. Cake, 9 oz. Tin

L587 **BRASSO** 6 oz. Tin, 1 gal. Tin

L588 **STEEL WOOL** 0, 1, 2, 3 Grades, 1 lb. Pack

L589 **TOILET PAPER** Single Roll, 6 doz. Carton

L590 **SOAP, HARD BAR,** 2 lb. Bar

L591 **SOAP, LIQUID HAND** 4 gal. Drum

L592 **SAND SOAP,** 14 oz. Cake

L593 **SOAP, SOFT-JELLY** 4 gal. Drum

L594 **SOAP, SOFT PUMICE,** 4 gal. Drum

L595 **SOLVOL,** 5 oz. Cake

L596 **SUNLIGHT,** 20 oz. Pkt.

L597 **WASHING SODA CRYSTALS** 70 lb. Bag

L598 **GO-GRYME BARRIER CREAM & CLEANSER,** 1 lb. Jar

L599 **INVISIGLOVE PROTECTIVE CREAM,** 1 lb. Jar, 3 lb. Can

L600 **KERODEX PROTECTIVE CREAM,** 2 lb. Tin, 2 lb. Refill

L601 **KLEEN-UP CHEMICAL CLEANSER,** 4 oz. Tube, 20 oz. Tin, ½ and 1 gal. Tin, Dispensers and Refills

L602 **SWARFEGA CHEMICAL CLEANSER, LANOLIN BASE** 1 pt., 1 gal Tin 5 gal. Drum

DYMO TAPEWRITERS

MODEL M6 ⅜" & ¼" TAPE
Moulded cycolac plastic with extra vertical embossing wheel.

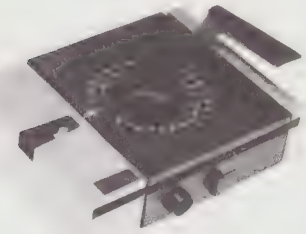
M6 TOOL & TAPE KIT
As above plus 5 rolls ⅜" Tape, 5 rolls ¼" Tape and carrying case.

MODEL M10 ⅜" & ¼" TAPE
Chrome finished with extra embossing wheel for smaller print.

M10 TOOL & TAPE KIT
As above plus 5 rolls ⅜" Tape, 5 rolls ¼" Tape and carrying case.

MODEL M20 ½" & ⅜" TAPE
Chrome finished with extra embossing wheel for smaller print.

M20 TOOL & TAPE KIT
As above plus 5 rolls ½" Tape, 5 rolls ⅜" Tape and carrying case.



MODEL M2300 KIT ¾" VINYL TAPE
Kit includes 9 magazines of 36' Vinyl Tape and carrying case.

MODEL M11 ½" METAL & VINYL TAPE
Chrome finished, embosses on a range of Metal and Vinyl Tapes, fitted with hole punch attachment.

DYMO EMBOSSING TAPES—VINYL

Cat. No.	Width & Length	Description and Colours	Cat. No.	Width & Length	Description and Colours
158	½" x 12'	Glossy Vinyl with Adhesive Black, Brown, Red, Grey, Green, Orange, Yellow, Purple, Clear, Blue, Fluorescent Red, Fluorescent Green, Gold, Woodgrain, Silver, Copper	145	½" x 12'	Matt Vinyl with Adhesive— Black, Blue, Green, Red
			171	½" x 12'	Striped Glossy Vinyl with Adhesive— Black/Gold, Green/Gold, Red/Gold, Brown/Gold, Blue/Gold
5201	⅜" x 12'	Glossy Vinyl with Adhesive— Black, Yellow, Gold, Red, Clear, Orange, Blue, Brown, Purple, Green, Grey, Woodgrain	172	½" x 12'	Glossy Vinyl with Adhesive— Trophy Gold
5208	¼" x 10'	Glossy Vinyl with Adhesive Black, Yellow, Grey, Red, Clear, Gold, Blue, Brown, Orange, Green	5203	⅜" x 12'	Striped Glossy Vinyl with Adhesive— Black/Gold, Green/Gold, Red/Gold, Brown/Gold, Blue/Gold
5135	¾" x 36'	Matt Vinyl with Adhesive Black only	5134	¼" x 36'	Glossy Vinyl with Adhesive— Black, Blue, Brown, Red, Green, Yellow, Woodgrain

DYMO EMBOSSING TAPES—METAL

310 ½" x 16' Aluminium without Adhesive
358 ½" x 12' Aluminium with Adhesive
319 ½" x 16' Contrast Aluminium without Adhesive (Colours Black & Red)
317 ½" x 10' Contrast Aluminium with Adhesive (Colours Black & Red)
348 ½" x 21' Copper without Adhesive
313 ½" x 12' Copper with Adhesive
325 ½" x 21' Stainless Steel without Adhesive

L603 **BEARING BLUE**
1 oz. Tube

L604 **INDICATOR CARDS**
All sizes, 100 Lots

L608 **CARPENTERS' PENCILS,**
flat

L609 **MARKOUT PAINT, WHITE**
1 pt., 1 qt., ¼ & 1 gal. Tin

L607 **CHALK**
Block — White 3⅜" x 1" x 1"
School Stick — White, 200 per Box
French Slab, Engineers — 8 per Box
French Stick, Engineers — 56 per Box
French Powdered — Sold by lb.

L605 **INDICATOR SHEETS, 20" x 30½"**

L610 **MARKOUT PAINT THINNERS**
1 pt., 1 qt., ¼ & 1 Gal. Tin

L611 **MARKING PENS, SPIRIT BASE**
All Colours

L613 **MARKOUT STAIN, BLUE**
1 pint Bottle

L612 **CRAYONS:**
1 doz. per Box
INDUSTRIAL MARKING AND LUMBER
Colours: Red, Blue, White, Green, Black, Yellow

L606 **INDICATOR CORDS, METALLIC**
1 yd. Hank

HINGES — STEEL

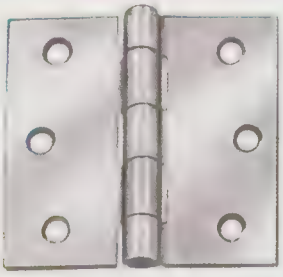
L620

LIGHT NARROW STEEL BUTT

Size	Width Open	No. of Holes	Csk. for Screw
1″	1″	4	4
1½″	1⅜″	4	4
2″	1⅝″	4	6
2½″	1 11/16″	6	6
3″	1 11/16″	6	6
3½″	2 5/16″	6	8
4″	2 13/16″	8	8

L621

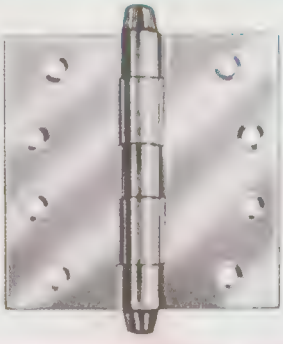
BROAD BUTT



Size	Width Open	No. of Holes	Csk. for Screw
3″	3″	6	8
3½″	3½″	6	8
4″	4″	8	10

L622

BROAD BUTT FIXED PIN



Size	Width Open	No. of Holes	Csk. for Screw
3″ x 3″	3″ x 3″	6	8
3½″ x 3½″	3½″ x 3½″	6	9
4″ x 4″	4″ x 4″	8	10
4″ x 3″	4″ x 3″	8	10
5″ x 5″	5″ x 5″	10	12

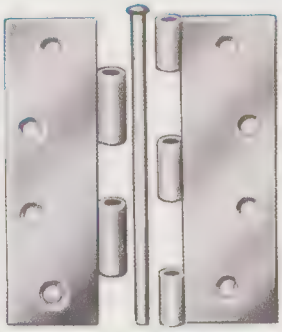
L623

PARLIAMENT CAST IRON

Size of flange	Length of joint	Width open	No. of holes	Csk. for Screw
4¾ x 1 13/16″	2″	4″	8	11
4¾ x 1 13/16″	2¼″	4½″	8	11
5″ x 7/8″	2⅜″	5″	8	12

L624

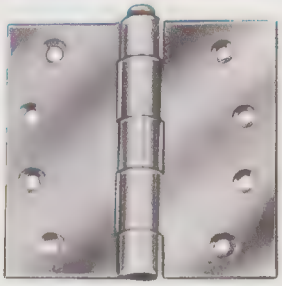
LOOSE PIN LIGHT NARROW STEEL BUTT



Size	Width Open	No. of Holes	Csk. for Screw
2½″	1 11/16″	6	6
3″	1⅞″	6	6
3½″	2 5/16″	6	8
4″	2 13/16″	8	8

L625

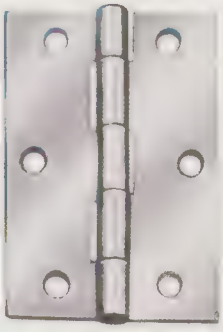
BROAD BUTT LOOSE PIN



Size	Width Open	No. of Holes	Csk. for Screw
3″	3″	6	8
3½″	3½″	6	8
4″	4″	8	10

L626

LIGHT CABINET STEEL BUTT



Size	Width Open	No. of Holes	Csk. for Screw
1½″	1 1/16″	4	2
2″	1¼″	4	4
2½″	1⅜″	6	4

L627

BACK FLAP STEEL

Size	Width Open	No. of Holes	Csk. for Screw
1″	2⅞″	6	6
1¼″	3¼″	6	7
1½″	3 9/16″	6	7
1¾″	3 15/16″	6	7
2″	4 5/16″	6	8
2½″	5 5/16″	6	9
3″	6 11/16″	6	10

HINGES — BRASS

L628

BRASS BUTT (EXTRUDED)

Size	No. of holes	Csk. for Screw
1 x $\frac{5}{8}$″	4	2
$1\frac{1}{4}$ x $\frac{11}{16}$″	4	2
$1\frac{1}{2}$ x $\frac{7}{8}$″	6	4
2 x $1\frac{1}{8}$″	6	5
$2\frac{1}{2}$ x $1\frac{3}{8}$″	6	6
3 x $1\frac{5}{8}$″	6	8
$3\frac{1}{2}$ x 2″*	8	8
4 x $2\frac{3}{8}$″*	8	10

Finishes available—Polished Brass, Chrome Plated, Satin Chrome Plated.

**Also available with loose pin.*

L631

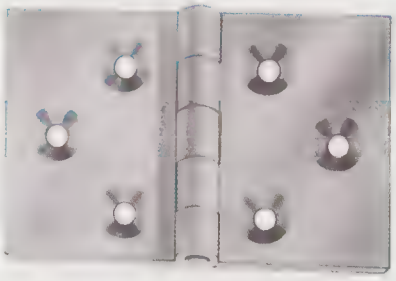
BRASS BUTT HEAVY (EXTRUDED)

Size	No. of holes	Csk. for Screw
3 x $1\frac{7}{8}$″	6	8
4 x $2\frac{3}{4}$″	8	10
5 x 3″	8	12

Finishes Available—Polished Brass, Chrome Plated, Satin Chrome Plated.

L629

BRASS BACK FLAP (EXTRUDED)



Finish— Polished Brass

Size	No. of holes	Csk. for Screw
$1\frac{1}{4}$″	6	2
$1\frac{1}{2}$″	6	4
2″	6	4

L632

LOOSE PIN BALL TIPPED

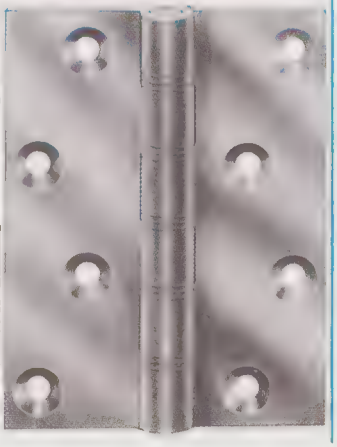
Finishes—Polished Brass, Satin, Chrome, Chrome Plated.

Size	No. of holes	Csk. for Screw
$3\frac{1}{2}$ x $3\frac{1}{2}$″	8	10
4 x 4″	8	12
5 x 5″	8	12

Also available Fixed Pin

L630

BRONZE WASHERED HEAVY BUTT



Size	No. of holes	Csk. for Screw
4 x 3″	8	12
4 x 4″	8	12
5 x 3″	8	12

Finishes—Polished Brass, Satin Chrome, Chrome Plated.

L633

STAINLESS STEEL BUTT

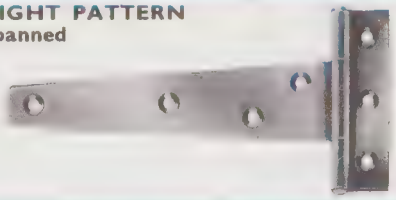
Loose Pin	$2\frac{1}{2}$″, 3″, $3\frac{1}{2}$″, 4″
Fixed Pin	2″, $2\frac{1}{2}$″, 3″, $3\frac{1}{2}$″, 4″

HINGES

L634 SCOTCH TEE HEAVY

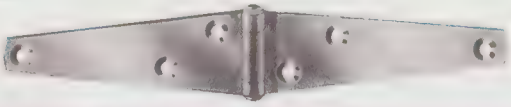
Length of Strap	Length of Butt	Width of Butt	No. of Holes	Csk. for Screw
6″	1 1/16″	4½″	7	12 Gauge
8″	1¾″	5¼″	8	12 Gauge
10″	1¾″	5½″	8	12 Gauge
12″	2 9/16″	6″	10	12 Gauge
14″	2 9/16″	6″	10	12 Gauge
16″	2 9/16″	6″	10	12 Gauge
18″	2½″	6″	10	12 Gauge
20″	2½″	6″	11	12 Gauge
22″	2½″	6″	11	12 Gauge
24″	2½″	6″	11	12 Gauge

L635 STEEL LIGHT PATTERN
Black Japanned



4″	¾″	2⅝″	6	6 Gauge
6″	⅞″	3″	7	8 Gauge
8″	⅞″	3″	7	8 Gauge
10″	⅞″	3¼″	7	8 Gauge
12″	1″	4″	7	8 Gauge
14″	1″	4″	8	9 Gauge
16″	1¼″	4⅜″	9	10 Gauge
18″	1¼″	4¾″	10	10 Gauge

L636 STEEL STRAP HINGES



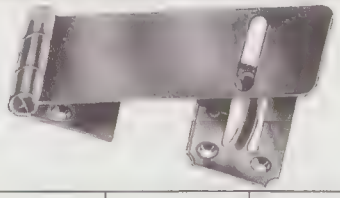
4″	8″	1 3/16″	6	6 Gauge
6″	12″	1⅝″	8	8 Gauge
8″	16″	1 11/16″	8	8 Gauge
10″	20″	2⅛″	8	9 Gauge
12″	24″	2⅛″	8	10 Gauge

HASPS & STAPLES

L637
STEEL
BLACK JAPANNED

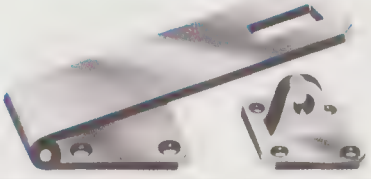
Size Length of Flap	Width at Joint	No. of Holes	Csk. for Screw
3½″	1½″	7	7 Gauge
4½″	1½″	7	7 Gauge

L638
STEEL
HEAVY TYPE



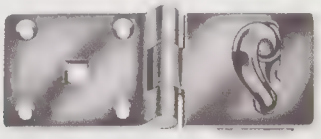
Length	Width at Joint	No. of Holes	Csk. for Screw
8″	2¼″	8	9 & 12
9″	2¼″	8	9 & 12
Also available Galvanised with Brass Pin			

L639
*BRASS
LIGHT SAFETY



Size Length of Flap	2½″	3″	3½″	4″	5″	6″
Width	15/16″	15/16″	1 1/16″	1 1/16″	1 1/16″	1⅜″
CSK for Screw	6 Gauge	6 Gauge	6 Gauge	6 Gauge	6 Gauge	6 Gauge
Polished Brass or Chrome Plated.						

L640
BRASS
HEAVY TYPE



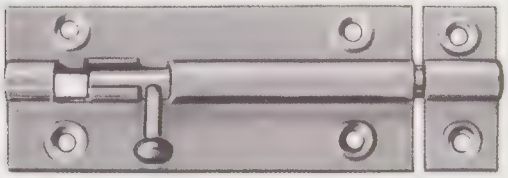
Length	Width at Point	No. of holes	Csk. for Screw
5″	2″	7	9 Gauge

L641 STEEL WIRE TYPE

Zinc Plated or Japanned.
Sizes: 2½″, 3½″, 4″, 5″, 6″

BOLTS

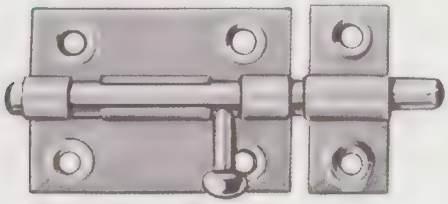
L661 DOOR BOLTS — Pressed Steel



3", 4"
Florentine Bronze
or Zinc Plated

1½", 2", 2½"
Florentine Bronze
or Zinc Plated

L662 DOOR BOLTS — Reversible pattern

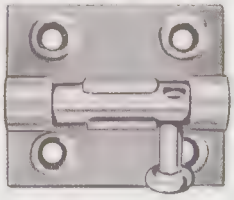


Florentine Bronze or Zinc Plated

L663 DOOR BOLTS — Pressed Steel

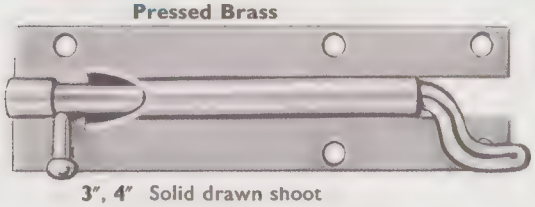
LITTLE GIANT PATTERN

Florentine Bronze or
Zinc Plated



L664 DOOR BOLTS — NECKED

Pressed Brass

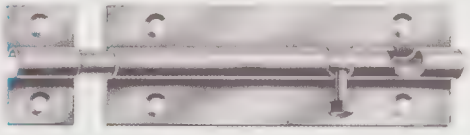


3", 4" Solid drawn shoot
Nickel Plated or Florentine Bronze

L665 TOWER BOLTS — Pressed Steel

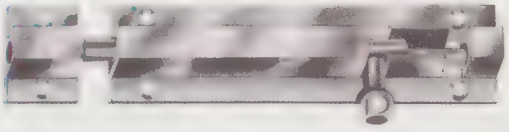
4", 6", 8"
Zinc Plated or Black Japanned

L666 BARREL BOLTS — Pressed Brass



2", 2½", 3", 4", 6"
¼" Solid Shoot Chrome Plated

L667 BARREL BOLTS — Extruded Brass



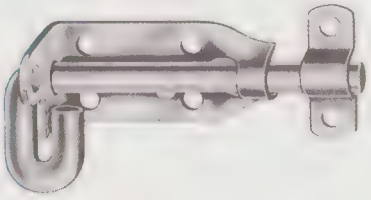
1" square section — ¼" Solid brass shoot
1½", 2", 2½", 3", 4", 6"
Chrome Plated, Satin Chrome or Florentine Bronze.

L668 BARREL BOLTS — Extruded Brass

1¼" square section. ⅜" shoot
3", 4", 6", 8", 10", 12"
Chrome Plated, Satin Chrome or Florentine Bronze.

L669 PADBOLTS — Pressed Steel

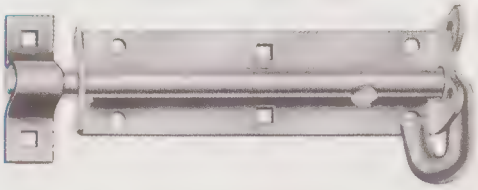
SINGLE EYE PATTERN



4" Single eye, ⅜" shoot
Zinc Plated

L670 PADBOLTS — Pressed Steel

DOUBLE EYE PATTERN



6" x ½" shoot
8" x ½" shoot

10" x ⅝" shoot
6" x ½" Long Shoot

Zinc Plated

PADLOCKS

L671 EXTRUDED BRASS 4 PIN TUMBLER

No.	Shackle		
	Material	Diameter	Opening
232	Steel	$\frac{7}{32}$″	$\frac{1}{2}$″
232A	Steel	$\frac{7}{32}$″	1″
232B	Brass	$\frac{7}{32}$″	$\frac{1}{2}$″
232AB	Brass	$\frac{7}{32}$″	1″

CASE SIZE
Width 1$\frac{1}{8}$″
Height 1$\frac{1}{8}$″
Natural Brass
Satin Finish

L672 EXTRUDED BRASS DEADLOCKING 5 PIN TUMBLER

No.	Shackle		
	Material	Diameter	Opening
245	Steel	$\frac{3}{8}$″	$\frac{13}{16}$″
245A	Steel	$\frac{3}{8}$″	1$\frac{1}{2}$″
245B	Brass	$\frac{3}{8}$″	$\frac{13}{16}$″
245AB	Brass	$\frac{3}{8}$″	1$\frac{1}{2}$″

CASE SIZE
Width 2″
Height 1$\frac{3}{4}$″
Natural Brass
Satin Finish

L673 EXTRUDED BRASS 5 PIN TUMBLER

No.	Shackle		
	Material	Diameter	Opening
234	Steel	$\frac{11}{32}$″	$\frac{3}{4}$″
234A	Steel	$\frac{11}{32}$″	1$\frac{1}{2}$″
234B	Brass	$\frac{11}{32}$″	$\frac{3}{4}$″
234AA	Steel	$\frac{11}{32}$″	1$\frac{7}{8}$″
234AB	Brass	$\frac{11}{32}$″	1$\frac{1}{2}$″

CASE SIZE
Width 1$\frac{3}{4}$″
Height 1$\frac{3}{8}$″
Natural Brass
Satin Finish

L674 LAMINATED STEEL 6 DISC TUMBLER

No.	Shackle		
	Material	Diameter	Opening
227	Steel	$\frac{11}{32}$″	$\frac{15}{16}$″
227S	Steel	$\frac{11}{32}$″	Adjustable Min. 1$\frac{7}{8}$″ Max. 3$\frac{5}{16}$″
226	Steel	$\frac{9}{32}$″	$\frac{7}{8}$″

CASE SIZE
Width 2″
Height 1$\frac{13}{16}$″
Plated

L675 DIE CAST ALLOY CYLINDER 5 DISC TUMBLER

No.	Shackle		
	Material	Diameter	Opening
225	Steel	$\frac{1}{4}$″	$\frac{3}{4}$″
225B	Brass	$\frac{1}{4}$″	$\frac{3}{4}$″
225L	Steel	$\frac{1}{4}$″	5$\frac{1}{2}$″

CASE SIZE
Width 1$\frac{1}{2}$″
Height 1$\frac{1}{2}$″
Baked Enamel

L676 SIDCO 225

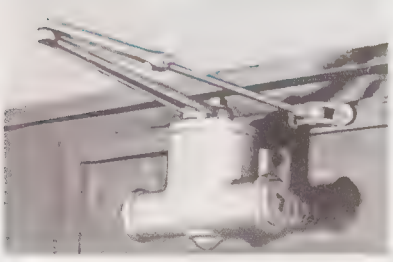
1$\frac{1}{2}$″ x 1$\frac{1}{2}$″ Body,
Pin Tumbler
$\frac{1}{4}$″ Hardened Steel
Shackle

L677

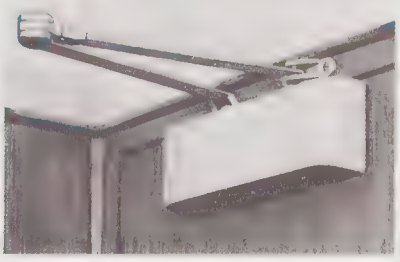
SIDCO 505L, 505
1$\frac{1}{2}$″ x 1$\frac{1}{2}$″ Body,
Disc Tumbler
$\frac{1}{4}$″ Hardened Steel Shackle

DOOR CLOSERS — Hydraulic Rack and Pinion

L678 STANDARD

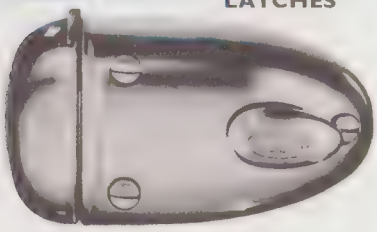


L679 FLAT SURFACE



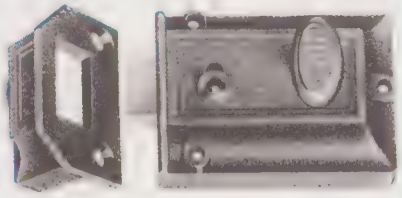
LATCHES AND DEADLOCKS

210 | 211 STREAM LATCHES



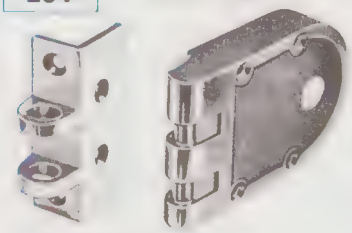
Case Size 3 11/16″ x 2 1/4″, Backset 2 3/8″
Door thickness 1 1/4″ Minimum
Bolt throw 5/16″
Finish: Bright Chrome, Satin Nickel or Bronze with Chrome Knobs

201 BRASS CYLINDER



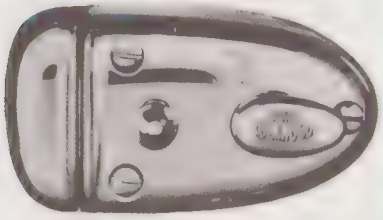
Case Size 3 3/8″ x 2 1/2″ x 1″
Backset 2 3/8″
Door thickness 1 1/2″ Minimum
Bolt, reversible 5/16″ throw
Finish: Brown Enamel

204 DEADLOCK



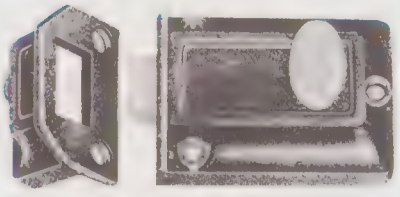
Case size 4 1/2″ x 2 7/8″ x 7/8″
Backset 2 3/8″
For Sliding doors or doors opening inwards
Finish: Satin Nickel, Bright Chrome, Satin Chrome or Bruno

213 STREAMLOCK—with Dead Bolt Action



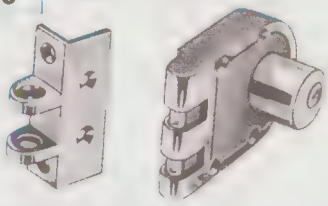
Case Size 3 11/16″ x 2 3/8″ x 1 1/16″, Backset 2 3/8″
Door thickness 1 1/2″ Minimum
Bolt throw 3/8″
Finish: Bright Chrome, Satin Nickel or Bronze with Chrome Knobs

100 STANDARD



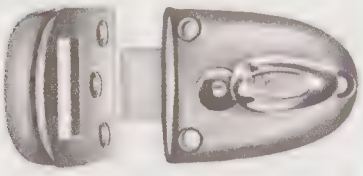
Case Size 3 3/8″ x 2 1/2″ x 1″
Backset 2 3/8″
Door Thickness 1 1/2″ Minimum
Bolt, reversible 1/2″ throw
Finish: Brown Enamel

205 DEADLOCK



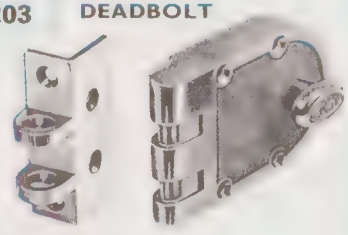
Case size 4 1/2″ x 2 7/8″ x 7/8″
Backset 2 3/8″
For Sliding doors or doors opening inwards
Finish: Satin Nickel, Bright Chrome, Satin Chrome or Bruno

200 STREAM LATCH Short Backset



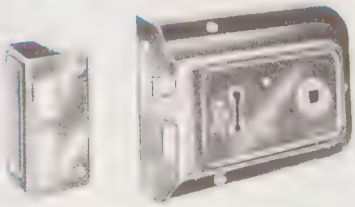
Case Size 2 11/16″ x 2 1/4″ x 1 1/8″
Backset 1 1/2″
Door thickness 1 1/4″ Minimum
Bolt throw 5/16″
Finish: Satin Nickel, Bright Chrome, Satin Chrome or Brown Enamel

203 DEADBOLT



Case Size 4 1/2″ x 2 7/8″ x 7/8″
Backset 2 3/8″
For Sliding doors or doors opening inwards
Finish: Satin Nickel, Bright Chrome, Satin Chrome or Bruno

L684 RIM LOCKS



6″ Stamped Case
Brass Bolt and Latch.
Finish: Black Japanned

DOOR CLOSERS For Fly Screen and Light Internal Doors

L680 SENIOR

Right or Left hand opening
Length Overall 16 1/2″

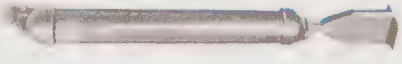
Tube — Seamless Steel 1 1/8″ diameter
Maximum door size 70 lbs.
Finish: Florentine Bronze, or Silver Lacquer . . . Satin or Bright Nickel, or Chrome

L681 JUNIOR

Length Overall 13 1/2″

Tube — Seamless Steel 1 5/16″ diameter
Maximum door size 40 lbs.
Finish: Florentine Bronze, or Silver Lacquer

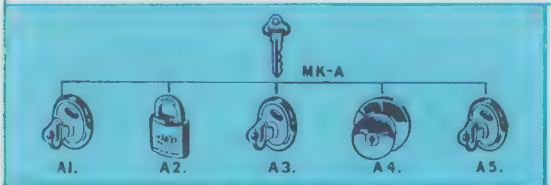
L682



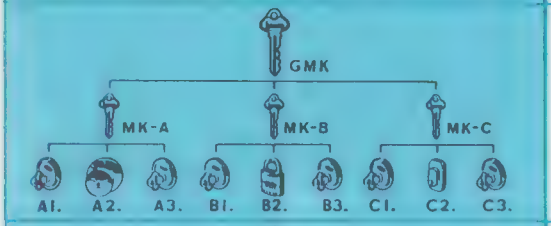
For Light to Medium Internal Doors.
Finish: Florentine Bronze or Silver Lacquer

SPECIAL KEYING SYSTEMS

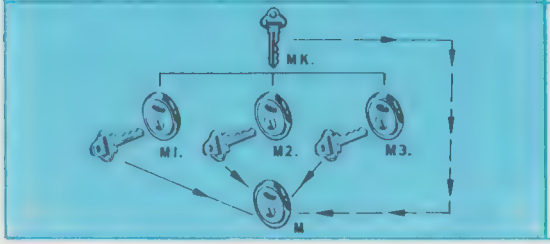
Keyed Alike Systems — A number of Locks to operate with 1 Key. There is no limit to the Number of Locks which can be supplied Keyed Alike.



Master Keyed Systems — A number of Locks each with its own Key, all built to a Master Key.



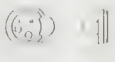
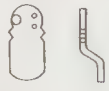
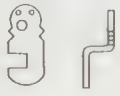
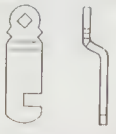
Grand Master Keyed Systems — A number of Locks, each with its own Key able to open one lock only, the Locks are divided into two or more groups, each group has its own Master Key which will open any lock in its own group but no other; all Locks can be opened by Grand Master Key.



Master Keyed — Maison System — For flats, offices or apartments where a number of Locks have individual keys able to open common Locks such as, front door or gate at the same time subject to Master Key.

270 COIN MACHINE OR CABINET LOCK

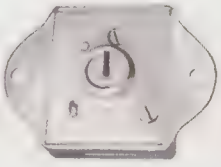
5 Disc Tumbler Mechanism, Zinc Alloy Body.
Available with 90°, 180°, 360° Travel, Keyed to Differ, or Keyed Alike, but not Master Keyed.
Finish: Bright Chrome.

CAM PLATE 270-13	CAM PLATE 270-23	 CAM PLATE 270-33	LOCKING LEVER 270-14	LOCKING LEVER 270-24	LOCKING LEVER 270-44
 LOCKING LEVER 270-54	 LOCKING LEVER 270-64	LOCKING LEVER 270-74	LOCKING LEVER 270-94	LOCKING LEVER 270-124	 LOCKING LEVER 270-164

131 131/1 CUPBOARD AND CABINET LOCKS AND LATCHES

5 Disc Tumbler, Zinc Alloy Cast Body, Brass Bolt. Keyed to Differ or Keyed Alike, but not Master Keyed. Finish: Silver Lacquer.

600 CUPBOARD LOCKS



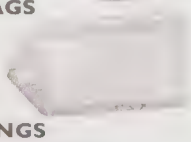
6 Lever, Zinc Alloy Cast Case and Cylinder, Brass Bolt. Nylon Key Guide, Keyed Alike or Keyed to Differ, or Master Keyed in four groups. Finish: Gold Lacquer.

L688 KEY LABELS

Pressed Brass 1" and 1¼" Diameter.
Finish: Bright Brass or Nickel Plated

L689 KEY TAGS

Moulded Plastic 1¾" x 1"
Fitted with Card and Key Ring.



L690 KEY RINGS

½", ⅝", ¾", 1", 1½", 1¾"

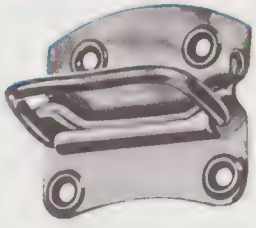
L691 DOUBLE BALL CATCHES

Obtainable in sizes $1\frac{1}{16}$", $1\frac{5}{16}$", $2\frac{3}{8}$"
Body: Machined extruded brass
Strike: Solid extruded brass
Balls: Steel
Springs: Piano wire. Adjustable spring tension.

L692 BALL CATCHES (Duralumin)

No. 410 $\frac{1}{4}$" No. 410 $\frac{5}{16}$" No. 410 $\frac{3}{8}$"
No. 410 $\frac{1}{2}$" No. 410 $\frac{5}{8}$"

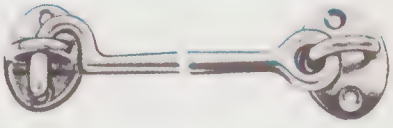
L693 STEEL CHEST HANDLES



Length in inches	$3\frac{1}{4}$"	$3\frac{1}{2}$"	4"
Depth in inches	$2\frac{13}{16}$"	$3\frac{1}{8}$"	$3\frac{1}{8}$"
Number of holes	4	4	4
Countersunk for screws Gge. No.	10	10	10

L694 CABIN HOOKS

Size 3", 4", 5", 6", 8" & 12"



L695 CABIN HOOKS Cast Brass

Length in inches	3"	4"	6"	8"
Size of Bar in inches	$\frac{1}{4}$" x $\frac{3}{16}$"	$\frac{5}{16}$" x $\frac{1}{4}$"	$\frac{5}{16}$" x $\frac{1}{4}$"	$\frac{3}{8}$" x $\frac{1}{4}$"
Size of Base Plate in inches	$1\frac{1}{4}$" x $1\frac{5}{16}$"	$1\frac{1}{4}$" x $1\frac{5}{16}$"	$1\frac{1}{2}$" x $1\frac{1}{16}$"	$1\frac{1}{2}$" x $1\frac{1}{16}$"
Number of holes	4	4	4	4
Countersunk for screws Gge. No.	5	5	6	6

CHAINS

L696 JACK

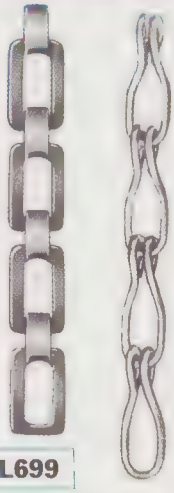
Bright steel, zinc plated or brass.
100 ft. per box
10G, 12G, 14G, 16G
112 Single

L697 DOUBLE LINK-JACK OR MATTRESS

Bright steel or zinc plated
100 ft. per box
14C

L698 TWISTED LINK COILS No. 111

Bright Steel, Zinc Plated or hot dipped Galvanised
6G, 8G, 10G, 12G, 14G, 16G — 100 ft. per box.



L699 ELECTROLIER & MIRROR

Steel, Nickel Plated, Florentine Bronze
2 dozen yards per box
1020, 14E

L700 BRASS CHANDELIER

Nickel Plated — bright brass dipped
1 dozen yards per box

No.	Link Size O.D.
227L	$\frac{1}{16}$" long x $\frac{9}{32}$" wide
983	$\frac{29}{64}$" long x $\frac{3}{16}$" wide
219L	$\frac{33}{32}$" long x $\frac{1}{4}$" wide
222	$\frac{13}{16}$" long x $\frac{9}{32}$" wide
225	$\frac{15}{16}$" long x $\frac{11}{32}$" wide

L701 BEAD CHAIN CLIPS

2 gross per box

Nickel Plated or Polished Brass

No. 10 Standard ←(to suit No. 10 chain) → No. 106 Universal
No. 6 Standard ←(to suit No. 6 chain)→ No. 107 Universal
No. 4 Standard ←(to suit No. 4 chain)→ No. 108 Universal

L702 BRASS BEAD

Nickel plated or Bright Brass Dipped
3 dozen yards per box
No. 4 $\frac{3}{32}$" **dia. No. 6** $\frac{1}{8}$" **dia. No. 10** $\frac{3}{16}$" **dia.**

SCREW HOOKS — SCREW EYES

L703 SHOULDERED CUP HOOKS

Pack: 1 Gross, ½ Gross

Length "L"	½"	⅝"	¾"	1"	1¼"	1⅜"	1½"	2"
Length "S"	5/16"	⅜"	7/16"	9/16"	11/16"	9/16"	¾"	⅞"
Screw Gauge	3	4	5	7	8	7	8	10

L704 SHOULDERED SQUARE HOOKS

Pack: 1 Gross, ½ Gross

Length "L"	9/16"	1"	1⅜"	2"
Length "S"	9/32"	7/16"	9/16"	⅞"
Screw Gauge	3	5	7	10

L705 PLAIN CUP HOOKS — STEEL S/COLOUR — STEEL BRASS PLATED — BRASS

Length Overall	½"	⅝"	⅝"	¾"	¾"	1"	1"	1¼"	1½"	1½"	2"	2"	2½"	2½"	3"	3"	3½"	4"	4"
Screw Gauge	1	1	2	2	3	4	5	7	8	10	8	10	10	12	12	14	14	16	18
Brass	*				*		*	*	*		*								

* *Indicates these sizes only available in Brass.*

Pack: 1 Gross | Pack: ½ Gross.

L706 PLAIN SQUARE HOOKS — STEEL S/COLOUR — STEEL BRASS PLATED — BRASS

Length Overall	¾"	1"	1½"	2"	2½"	3"
Screw Gauge	3	5	7	9	12	14
Brass	*	*	*	*	*	

* *Indicates these sizes only available in Brass.*

Pack: 1 Gross | Pack: ½ Gross

L707 SCREW EYES — SMALL EYE — STEEL S/COLOUR — STEEL BRASSED — BRASS

Length Overall	⅜"	½"	½"	⅝"	½"	⅝"	½"	¾"	⅝"	¾"	¾"	⅞"	1"	1⅛"	1⅜"
Screw Gauge	00	00	0	0	1	1	2	2	3	3	4	4	6	8	10
Internal Dia. of Eye	3/64"	3/64"	3/32"	⅛"	⅛"	⅛"	⅛"	⅛"	5/32"	5/32"	5/32"	5/32"	3/16"	7/32"	¼"
Alt. Description	MODEL EYES				—	A1	—	A2	—	A3	—	A4	A6	A8	A10

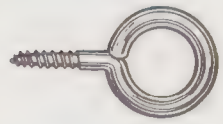
Pack: 1 Gross

L708 SCREW EYES — MEDIUM EYE — STEEL S/COLOUR — STEEL BRASSED — BRASS

Length Overall	5/8"	¾"	⅞"	1"	1"	1⅛"	1¼"	1 5/16"	1⅜"	1½"	1¾"	2"	2¼"	2½"	2⅝"
Screw Gauge	0	1	2	3	4	5	6	7	8	10	12	14	16	18	20
Internal Dia. of Eye	5/32"	7/32"	¼"	¼"	9/32"	9/32"	5/16"	5/16"	11/32"	⅜"	7/16"	7/16"	½"	½"	9/16"
Alt. Description	B0	B1	B2	B3	B4	B5	B6	B7	B8	B10	B12	B14	B16	B18	B20

Pack: 1 Gross | Pack: ½ Gross | Pack: ¼ Gross

L709 SCREW EYES — LARGE EYE — STEEL S/COLOUR — STEEL BRASSED — BRASS



Length Overall	⅞"	1"	1⅛"	1¼"	1½"	1⅝"	1⅞"	2⅛"	2⅜"	2⅝"	2⅞"
Screw Gauge	1	2	4	6	8	10	12	14	16	18	20
Internal Dia. of Eye	5/16"	11/32"	⅜"	7/16"	½"	½"	9/16"	⅝"	⅝"	11/16"	¾"
Alt. Description	C1	C2	C4	C6	C8	C10	C12	C14	C16	C18	C20

Pack: 1 Gross | Pack: ½ Gross | Pack: ¼ Gross

L710 SCREW EYES — MEDIUM EYE — SHORT SHANK STEEL S/COLOUR — STEEL BRASSED — BRASS

Length Overall	½"	⅝"	11/16"	¾"	⅞"
Screw Gauge	0	1	2	3	4
Internal Dia. of Eye	5/32"	7/32"	¼"	¼"	9/32"
Alt. Description	K0	K1	K2	K3	K4

Pack: 1 Gross

PROTECTIVE CLOTHING, WET WEATHER-WORKSHOP-WELDERS

L711 APRONS — CHROME LEATHER WELDERS
With Bib—Leather Straps

L712 APRONS — PLASTIC — FOOD PROCESSORS
White, 28" x 36", 36"x 42", 36" x 48"

L713 APRONS — PLASTIC SOLVENT RESISTANT
Black, 28" x 36", 36" x 42", 36" x 48"

L714 APRONS — PLASTIC WATERPROOF
Black, 28" x 36", 36" x 42", 36" x 48"

L715 GUM BOOTS WELLINGTON TYPE
Sizes various, or to order

L716 WORKSHOP PROTECTIVE BOOTS, Sizes to order

L717 COATS P.V.C. ¾ length or full length, heavy duty. SM-M-OS-XOS

L718 COATS P.V.C. Full length, lightweight. SM-M-OS-XOS

L719 SLACKS P.V.C., Elasticized tops, heavy duty or lightweight SM-M-OS-XOS

L720 SOUTH WESTERS P.V.C.
Tie-on type, Black or Yellow with earflaps

L721 GAUNTLETS, ASBESTOS
Mitt type

L722 GAUNTLETS, CHROME LEATHER

L723 GAUNTLETS, P.V.C.

L724 GAUNTLETS, RUBBER

L725 GLOVES, CHROME LEATHER

L726 GLOVES, CHROME LEATHER & COTTON BACKED

L727 GLOVES, COTTON

L728 GLOVES, P.V.C.

L729 JACKETS
Chrome leather welders

L730 SLEEVES
Chrome leather welders

L731 SPATS
Chrome leather welders, short style

EVEREADY TRADE-MARKS

BATTERIES for Torches, Lamps, Flashlights, Lanterns and Radios
TORCHES — Domestic, Industrial, Waterproof and Lanterns
TORCH GLOBES — 1.2 to 7.2 Volt Screw or Flange Base

L732 LAMPS — ELECTRIC INCANDESCENT
32V 240V, Wattages various

L733 FLUORESCENT TUBES
240V, 40 Watts

L734 WHISTLES—DOGMAN
Brass, Nickel Plated

L735 DISTILLED WATER
1 gal. Cntnr.

L736 PIANO WIRE
Tempered & Polished, Gauges various, 1 lb. Roll

L737 FILTER TOWELLING
36 ins. wide rolls

L738 HESSIAN
14 oz. x 72 in. wide, 100 yd. Bolts

L739 BAGS — HESSIAN
Ash & Sugar

L740 COCONUT FIBRE
56 lb. Bale teased
336 lb. Bale pressed

L741 FILTER COKE
Bag lots

L742 SAW DUST
Bag lots

L743 SIEVES — WIRE MESH
$\frac{1}{16}$", $\frac{1}{8}$", $\frac{3}{16}$", $\frac{1}{4}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{3}{4}$"
20" diam. wooden Rim

BANGOR SLIDING TRACKS

DOMESTIC

Set	Application	Door Sizes	Door Weight
"SOCIETY" A441	Cavity or face of wall	2'2"–5'0" S. 2'2"–4'6" D.	Up to 120 lb.
"SOCIETY" A442	Face of wall	2'2"–5'0" S. 2'2"–4'6" D.	Up to 120 lb.
"SPACESAVER" 430	Cavity or face of wall	2'2"–5'0" S. Up to 2'9" D.	Up to 120 lb.
"STANDARD" A421	Face of wall	2'2"–3'3" S.	Up to 80 lb.

INDUSTRIAL

Set	Application	Door Sizes	Door Weight
No. A206	Straight Slide	3' 6'	Up to 400 lb.
No. A207	Straight Slide	7'–10'	Up to 400 lb.
No. A210	Straight Slide	3'–10'	Up to 600 lb.
No. A215	Straight Slide	5'–13'	Up to 1100 lb.
No.A216FW	Parallel Slide	10'–20'	Up to 400 lb.
No. A216UL	Parallel Slide	10'–20'	Up to 400 lb.
No.A220FW & A220UL	Parallel Slide	10'–20'	Up to 600 lb.
No.A225FW & A225UL	Parallel Slide	10'–20'	Up to 1100 lb.

Set	Application	Door Sizes	Door Weight
A226	Accordion	As required	Up to 80 lb.
A228	Accordion	As required	Up to 150 lb.
A230	Accordion	As required	Up to 250 lb.
A242–A250	Fold-A-Side	As required	Up to 125 lb.
No. A260	End Fold	As required	Up to 80 lb.
No. A261	End Fold	As required	Up to 80 lb.
No. 270	Light Open Rail	As required	Up to 100 lb.
No. 275	Medium Open Rail	As required	Up to 600 lb.
No. 280	Heavy Open Rail	As required	Up to 1500 lb.
285–291	Light Round the Corner	As required	Up to 80 lb.
No. 295	Medium Round the Corner	As required	Up to 150 lb.

LUBRICANTS, GREASES, AND SPECIAL PURPOSE OILS

L744 BARRARTIA No. 6
1-5 lb. tins

L745 CASTOR OIL INDUSTRIAL GRADE
1-4 gal. tins

L746 CUTTING COMPOUND TREFOLEX
20 oz., 5 lb. tins

L747 CUTTING OIL — SOLUBLE
1-4 gal. tins

L748 T.E.C. SCREWING OIL
1 pt., ½ gal. 1 gal.

L749 GRAPHITE COLLOIDAL
6 oz., 1 pt., ¼-½-1 gal. tins

L750 GRAPHITE CUP GREASE No. 3
1 5 lb. tins

L751 UNEDO No. 3 CUP GREASE
1-5 lb. tins

L752 JET LUBE GREASES
Full Range

L753 VASELINE
1 5 lb. tins

L754 GRAPHITE PAINT
1 lb., ¼-½-1 gal. tins

L755 KOPRA COTE ANTI-SEIZE
1-5 lb. tins

L756 NOLOK — Anti-Seizing and Sealing Agent, for use with Stainless Steel, Steel, Aluminium and High Temp. Alloys.
1 oz. tube

L757 NEATSFOOT OIL COMPOUND
1 pt., ¼-½-1-4-5 gal.

L758 NEATSFOOT PURE OIL
1 pt., ¼ ½-1 4 5 gal.

L759 RAW OIL
5 gal.

L760 FISH OIL
1-4-5 gal.

L761 BOILED OIL
5 gal.

L762 WOOD PRESERVING OIL
1-4-5 gal.

L763 CREOSOTE OIL (DARK)
1 pt., ¼-½-1-4-5 gal

L764 CREOSOTE 3% PENTACHLORPHENOL
¼-½-1-4-5 gal.

L765 COAL TAR
½-1-4-5 gal.

L766 PITCH
1-2-5-10 29 56 lb., 4 cwt.

L767 STOCK TAR COMPOUND
1 pt., ¼-½-1 4 5 gal.

L768 STOCKHOLM TAR — PURE
1 pt., ¼-½-1-4-5 gal

L769 BITUMINOUS BLACK PAINT
1 pt., ¼-½-1-4-5 gal.

L770 WHALE OIL
½-1-4-5 gal.

L771 WIRE ROPE OIL — BLACK
1-4 5 gal.

L772 PHENYLE (3% PHENOLS)
1 pt., ¼-½-1-4 5 gal.

SURFACE TREATMENTS, PAINTS AND RUST PREVENTATIVES

L773 APEXIOR No. 1 PAINT FOR HOT METAL SURFACES
1 gal. tin

L774 APEXIOR No. 1 THINNERS
1 gal. tin

L775 APEXIOR No. 3 PAINT FOR COLD METAL SURFACES
1 gal. tin

L776 APEXIOR No. 3 THINNERS
1 gal. tin

L777 BOTANITE ANTI-RUST ENAMEL
1 gal. tin, 4 gal. drum

L778 KILL RUST ANTI-RUST TREATMENTS AND SEALANT
½-1 pt., ¼-½ 1 gal. tins

L779 NORICENE DESCALANT ADDITIVE
5 gal. P.V.C. Container

L780 FERRO-PRO RUST CONVERTING PAINTS
A comprehensive range of specialized products for industrial use. Metal pre-treatment solutions, descalants, rust converters and degreasers, coupled with metal primers, protective coatings, afford a diversification of surface protections.
¼-½ pt., ¼-½-1 gal. tins

L781 PENETRENE PENETRATING OIL
4 oz., 15 oz., ¼-½-1 gal.

L782 PLUS GAS ANTI-CORROSIVE FLUID
7 oz., ½-1 pt., ¼-1 gal

L783 R.P. 7 STOPS RUST PRESSURE PACKED
9 oz., 14 oz., 1 qt. tins

L784 W.D. 40 PENETRATES, LUBRICATES and displaces moisture. It does not harm paint and frees rusted nuts and bolts. W.D. 40 eliminates squeaks and gives complete moisture protection to all electrical systems. It prevents electrolytic action in bimetallic applications.
14 oz. ¼-1 gal. tin

L785 WHITE LEAD IN OIL
7 14 28 56 lb.

L786 RED LEAD POWDER
7 14 28 56 112 lb. tins

L787 FERRO-PRIME RUST PREVENTION PRIMERS
½-1 pt., ¼-½-1 gal.

L788 C.R.C. Special Formulae 2-26, 3 36, 5 56, 6 66, Contact Cleaners and Electric Shield offer a wide range of lubricants, inhibitors, and sealants applicable to situations ranging from general tool and shop maintenance, automotive, marine and electrical maintentance to external weather situations.

L789 ROVAL COLD GALVANIZING PAINT
½ 1 2 6 7 14 28 lb. tins

L790 ROVAL COLD GALVANIZING THINNERS
As required

L791 WEATHERGARD FILMFLEX
A quick drying flexible protective film which penetrates through and spreads beneath oils, rust and dirt stopping progressive rust and corrosion, Filmflex has high dielectric strength. It keeps out water, salts, acids and gases. Filmflex is non-inflammable, non-toxic and odourless, can be applied to wet or dry surfaces and will not damage mechanical parts, ball races, rubber seals gaskets Clean water is the only thinner required.
¼-½-1 pt., ¼-½-1 gal.

L792 FORMINEX Marine Varnishes and Chemical Metal Treatments present a variety of specialised treatments, covering a wide range of practical applications, both in the Marine and Industrial spheres.

L793 HARDITE SURFACE HARDENER
1-4-7 lb. tins

ADHESIVES, EPOXIES, CEMENTS, COMPOUNDS, PUTTIES

L794 **ADFAST** All Purpose Rubber Adhesive, 1 pt., 1 gal. Tin

L795 **AQUADHERE** P.V.A. Wood Working Glue, 3 oz. Tube, ¼, 1, 2 pt., ½, 1 gal. Tin

L796 **ARALDITE** 2 part Epoxy Resin Adhesive, 1 oz., 10 oz. Tube

L797 **QUICK-GRIP** Contact Adhesive, 5 oz. Tube, ¼, 1, 2 pt., 1 gal. Tin

L798 **BOSTIK CONTACT CEMENT, CLEAR,** 4 oz. Tube, 1, 2 pt., 1 gal. Tin

L799 **BOSTIK UNIVERSAL COMPOUND,** Black, White, 4 oz. Tube, 1, 2 pt., 1 gal. Tin

L800 **PLIOBOND CHEMICAL ADHESIVE** 4 oz. Tube, 1 pt., 1 gal. Tin

L801 **BUTYL MASTIC CAULKING COMPOUND,** Black, Grey, White, 14 oz. & 18 oz. Cartridge

L802 **BUTYL MASTIC CAULKING GUNS** To suit 14 oz. & 18 oz. Cartridge

L803 **METAL SET,** Industrial type Metallic Epoxy Compounds, 1 lb. Pack

L804 **PLASTI-BOND,** Rapid Set Plastic Putty, 4 oz. Tube, 1, 4 lb. Tin

L805 **PLASTIC MASTIC** Epoxy Resin Putty, ½ pt., 1 qt., 1 gal. Kit

L806 **PLASTIC PUTTY CAULKING COMPOUNDS** Black, Grey, White, 1¼ lb. Crtn., 7 lb. Tin

L807 **PLASTIC WOOD** Filling Compound, 8 oz., 1 lb. Tin

L808 **PLASTICENE** 1 lb. Pack

L809 **SPECIAL GLAZING PUTTY** 1 lb. Crtn., 7, 14, 56 lb. Tin

L810 **STEEL FRAME PUTTY** 1, 7, 14, 28 lb. Tin

L811 **FIRE PROOF PUTTY** Black or White, 1 lb. Tin

L812 **SMOOTH-ON IRON CEMENT** 1, 5 lb. Tin

L813 **BORAX** Loose, 112 lb. Bag

L814 **GLYCERINE** 12½ lb. Tin — 1 gal.

L815 **LITHARGE** 7, 14, 28, 56, 112 lb. Tin

L816 **RESIN** Loose, 112 lb. Bag

L817 **SAL AMMONIAC** Loose, 112 lb. Bag

L818 **SHELLAC** Loose

L819 **WHITING** Loose, 56 lb. Bag

L820 **CAULKING COTTON** 1 lb. Ball

L821 **SYPHON WOOL** 3 ply, 1 oz. skein

DEVCON PRODUCTS

L822 **PLASTIC STEEL — A** (Putty Type), 80% Steel, 20% Plastic, non-sagging, can be applied to vertical surfaces.

L823 **PLASTIC STEEL — B** (Liquid Type), 80% Steel, 20% Plastic.

L824 **DEVCON C —** Heat-resistant, Heat Curing Material, for Plastic and Rubber Moulds or high temperature applications.

L825 **DEVCON L —** (Putty Type), 94% Lead, used for lining tanks or protecting against corrosion

L826 **DEVCON F —** The Aluminium Putty, 80% Aluminium, non-sagging, hardens to same colour as aluminium

L827 **DEVCON F2 —** The Aluminium Liquid — 80% Aluminium

L828 **DEVCON BR —** The Bronze Putty — 80% Bronze, 20% Plastic

L829 **DEVCON ST —** 80% Stainless Steel, 20% Plastic — Putty Type

L830 **DEVCON WR —** (Liquid Type), Wear-resistant, self-lubricating material for areas subject to severe wear

L831 **DEVCON WR2 —** (Putty Type) Wear-resistant, self-lubricating material

L832 **DEVCON** Plastic Carbide Putty or Liquid for applications requiring extreme abrasion resistance

L833 **DEVCON Z —** Cold Galvanizing, 95% pure zinc—protects iron or steel by galvanic action even when protective surface is broken

L834 **DEVCON SF —** Super Fast Plastic. Steel hardens in 5 minutes

L835 **DEVCON "TAP AID" —** One drop for easier tapping, threading, drilling, milling, etc.

L836 **DEVCON FLEXANE —** Room temperature curing urethanes — A rubber-like material.

Flexane Type	Available as	Durometer Shore A Hardness	FOR:
Flexane 95	Liquid and Putty	95	Casting or repair of soft or semi-hard rubber rolls. Repair of Conveyor belting, hose, and sand blast cabinets. Lining pumps, tanks, chutes and duct work. Holding fixtures, metal forming dies, die pads, and core boxes.
Flexane 85	Liquid and Putty	85	Caskets and grommets. Cast parts for textile and other machines. Flexible molds.
Flexane 60	Liquid	60	Covering factory truck wheels, tagging pulleys. Resilient pads for steel rule dies.
Flexane 30	Liquid	30	Electrical compounds. Cushions and shock pads, bumpers.

ADHESIVES, COATINGS AND SEALERS

The extensive range of 3M Brand Adhesives, Coatings and Sealers is engineered for industry, and provides a thoroughly reliable method of joining, sealing and protecting all types of materials, resulting in improved products, increased production, and a reduction in costs.

3M BRAND CONTACT CEMENTS

FASTBOND CONTACT CEMENT

5 oz. tubes
½ pint cans
Pint cans
Quart cans
½ gallon cans
Gallon cans
5 gallon pails
44 gallon drums

A high strength contact cement for bonding plastic laminates, aluminium, wallboard, particle board, plywood, masonry, wood, leather and other porous and non-porous materials. Fast drying, exceptionally high bond strength, superior resistance to heat, sunlight and moisture. Bonds immediately and permanently upon contact, without clamps or presses. **Yellow**

EC1828

5 gallon pails
44 gallon drums

High strength sprayable adhesive for bonding plastic laminate to most surfaces, which can be repositioned before bonding. **Red**

FASTBOND CONTACT CEMENT

Roller Coating Grade

¼ gallon cans
½ gallon cans
Gallon cans
5 gallon pails

A special grade of contact cement designed for application with a long nap paint roller. **Yellow**

WALLBOARD ADHESIVE

10 fl. oz. cartridges

This new quick-setting adhesive has been developed by 3M to provide a trouble-free method of securing most types of wallboard. 3M Brand Wallboard Adhesive will bond plywood, hardboard, particle board, asbestos cement, and most other wall surfacing materials to timber, masonry and other sound surfaces. **Yellow**

FASTBOND 5 CONTACT CEMENT

Gallon cans
5 gallon pails
44 gallon drums

A sprayable, high strength, fast drying contact cement for bonding most porous and non-porous surfaces. **Green**

3M BRAND INSULATION ADHESIVES AND SEALERS

INSULATION ADHESIVE 34R

Quart cans
Gallon cans
5 gallon pails

A low pressure sprayable adhesive for bonding lightweight insulation materials other than polystyrene foam. **Red**

INSULATION ADHESIVE TACKY

Pint cans
Quart cans
Gallons cans
5 gallon pails
44 gallon drums

A general purpose adhesive for bonding most lightweight materials to themselves and other surfaces. **Dark Amber**

POLYSTYRENE FOAM ADHESIVE — BLUE

Quart cans
Gallon cans
5 gallon pails
44 Gallon drums

A low pressure sprayable adhesive for bonding polystyrene foam **Blue**

POLYSTYRENE FOAM ADHESIVE — AU6998

Quart cans
Gallon cans
5 gallon pails
44 gallon drums

High heat resistant, low pressure sprayable adhesive for bonding polystyrene foam. **Green**

DUCT SEALER 800

Pint cans
Quart cans
Gallon Cans
5 gallons pails
44 gallon drums

A one part air drying sealer with good resistance to moisture and oil. Sets to a tough, rubbery sealant. **Red**

DUCT SEALER 800V

10 oz. cartridge
Gallon cans
5 gallon pails

A one part air drying sealer which will not flow when applied to vertical or inverted surfaces. Similar properties to Duct Sealer 800. **Red**

3M BRAND INDUSTRIAL ADHESIVES, COATINGS AND SEALERS

EC776

Pint cans
Quart cans
Gallon cans
5 gallon pails
44 gallon drums

A high strength adhesive with exceptional resistance to oil, petrol and aromatic fuel. Bonds most plastics and synthetic rubbers. **Transparent Amber**

EC847

Pint cans
Quart cans
Gallon cans
5 gallon pails

A fast drying adhesive for bonding rubber and vinyl plastic. Good resistance to plasticizers. **Brown**

EC1034
5 gallon pails
44 gallon drums
A tough rubberized protective coating against rust and abrasion. **Black**

EC1099
Pint cans
Quart cans
Gallon cans
5 gallon pails
A general purpose high strength adhesive with good resistance to plasticizer migration of vinyl plastics. **Tan**

EC2296
Pint cans
Quart cans
Gallon cans
5 gallon pails
44 gallon drums
Low pressure sprayable adhesive for bonding paper, board and other lightweight materials. **Clear**

SCOTCHWELD BRAND STRUCTURAL ADHESIVE EC2216B/A

2 oz. kit
A room temperature curing epoxy adhesive that has permanent flexibility, will not crack, chip or weaken from stress and vibration. Bonds aluminium, copper, brass, nickel, wood, ceramics, natural and synthetic rubbers and most other materials. **Light Grey**

EC1359
Pint cans
Quart cans
5 gallon pails
A sprayable high strength adhesive for bonding vinyl plastic sheeting. **Tan**

WEATHERBAN BRAND One-part Sealer 101

Cartridges
A one part polysulphide rubber based sealing compound which cures upon exposure to a firm, rubbery waterproof solid. The sealer is ready for use direct from the cartridge.
Black, Grey or White

WEATHERBAN PRIMER

Quart cans
Weatherban 101 requires Weatherban Primer on glass, porous surfaces, masonry surfaces and timber.

EC1202
A reinforced synthetic rubber tape form sealer for sealing between metal, glass and other materials. **Black**

PALLETIZING ADHESIVE

Gallon cans
5 Gallon pails
44 gallon drums
A low tack sprayable adhesive for unitizing plastic bags and cardboard cartons. **Clear**

3M BRAND HARDWARE AND AUTOMOTIVE REFINISH ADHESIVES

SCOTCH BRAND SPRAY ADHESIVE

16 oz. aerosol can
A clear adhesive for bonding paper, aluminium foil, plastic, foam, felt, cloth, cork, cardboard and most other lightweight materials. The aerosol can makes application simple, quick and clean. **Clear**

SCOTCH BRAND EPOXY ADHESIVE

1 oz. kits
An extremely strong adhesive for permanently fixing metals, glass, ceramics, wood, rubber and other materials. **Transparent Amber**

TRIM ADHESIVE

5 oz. tubes
A fast drying, non-staining adhesive for bonding all kinds of trim materials. Especially suited for vinyls. **Tan**

DISC CEMENT

$\frac{1}{2}$ pint cans
Pint cans
Quart cans
A heat and water resistant cement for adhering paper or cloth backed discs to all types of back-up pads. Excellent strength, however, allows discs to be easily removed after use. **Tan**

DRIP-CHECK SEALER

5 oz. tubes
A light coloured, smooth sealer for small cracks and openings. Fast drying — may be painted over 30 minutes after application. **Light Grey**

CLEAR AUTO GLASS SEALER

5 oz. tubes
A colourless transparent sealer for cracks, small openings and leaking windshields. Remains permanently flexible, waterproof and does not discolour. **Clear**

WINDO-WELD SEALER

Cartridges
For adhesive caulked windshield installations. No mixing, easy cartridge application, permanent flexibility gives fast, easy, trouble-free results. **Black**

WINDO-WELD PRIMER

Pint cans
Primer used prior to application of Windo-Weld Sealer.

AUTOBODY DEADENER

Quart cans
Gallon cans
5 gallon pails
A tough, rubberized coating for sound deadening and corrosion protection of underbodies, door panels and other metal areas. **Black**

WINDSHIELD SEALER

18 oz. cartridges
1 lb. packs
$1\frac{1}{2}$ lb. packs
5 gallon pails
For permanent sealing between glass and rubber or metal surfaces. Absorbs windshield movement, smooth finish for best appearance, completely water resistant. **Black**

CAULKING GUN

A well made, quick change gun for cartridge packed sealers, which makes caulking so much easier, faster and more efficient.

ADHESIVE CLEANER

5 gallon pails
44 gallon drums
Blend of solvents for clean up. Not to be used as thinners. **Clear**

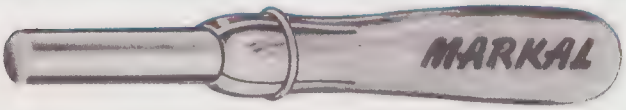
ADHESIVE CLEANER AU6990

Quart cans
Gallon cans
5 gallon pails
44 gallon drums
Special solvent for clean up of 3M Brand Insulation Adhesives. **Clear**

3M COMPANY OFFERS SERVICE THROUGH TECHNICAL REPRESENTATION TO HELP SOLVE YOUR ADHESIVE PROBLEMS.

MARKAL PAINTSTIK MARKERS

L837 **FOR COLD SURFACES — 50°F to 200°F**
MARKAL "B"
Colours: Red, White, Blue, Green, Yellow, Black, Orange, Purple, Pink, Brown, Grey, Gold, Aluminium



FOR RED HOT SURFACES — up to 2,000°F

L838 **MARKAL "H" 150°F to 1,200°F**
Colours: Red, White, Blue, Green, Yellow, Black, Orange

L839 **MARKAL "H-T" — 250°F to 1,800°F**
Colours: Red, White, Blue, Green, Yellow, Black, Orange

L840 **MARKAL "K" — 1,400°F to 2,000°F**
Colours: White only

FOR HEAT TREATMENT OR WELDING up to 2,400°F

L841 **MARKAL "A" — up to 1,400°F**
Colours: Red, White, Yellow, Black

L842 **MARKAL "M" — up to 1,600°F**
Colours: Red, White, Blue, Yellow, Black, Orange

L843 **MARKAL "M10" — up to 2,400°F**
Colours: White only

L844 **MARKAL THERMOMELT STICKS**
Precision Temperature Indicators. Required temperature is indicated by Melting Action of Thermomelt, accurate to plus or minus 1° of indicated temperature, available in 86 exact temperature rating from 100°F to 2,000°F

L845 **MALTHOID ROOFING**
36″ wide Rolls 72′ long
1 Ply (30lb.), 2 Ply (40lb.), 3 Ply (50lb.), 5 Ply (60lb.)
⅛″ thick, 80lb. Rolls, 36′ long

L846 **PABCOBESTOS ROOFING**
40 lb. Rolls, 36″ Rolls, 72′ long

L847 **PABCO SATURATED ASBESTOS FELT**
36″ wide Rolls, 166⅔′ long

L848 **KANE FILL**
Preformed Bitumen Saturated Expansion Jointing in thickness of ⅜″, ½″, ¾″, 1″

L849 **MALTHOID DAMPCOURSE**
Rolls of 72′ long
2 Ply: 4½″ and 9″ wide
3 Ply: 4½″, 9″, 13½″, 18″ wide
5 Ply: 18″ wide
Also strips 3″ x 36″, 3 Ply and 5 Ply

L850 **PABCO ASPHALT DAMPCOURSE**
Rolls 40′ long
4½″, 6″ and 9″ wide and Strips 3″ x 36″

L851 **ALGARD DAMPCOURSE**
Rolls 40′ long
4½″, 6″, 7″, 9″, 12″, 13½″ and 18″ wide

L852 **SUPER ALGARD DAMPCOURSE**
Rolls 40′ long
4½″, 6″, 7″, 9″, 12″, 13½″ and 18″ wide

L853 **COPAGARD METAL DAMPCOURSE**
Rolls 40′ long, 3″ to 13½″ wide

L854 **BLACK HYDROSEAL No. 1067**
8 oz., 1¼ and 2½ lb. Cups, 5, 10, 50 and 400lb. Metal Containers, 10 oz. Cartridges

L855 **BRUSHABLE HYDROSEAL No. 155**
Coverage 75 to 150 sq. ft. per gal.
1 pint to 44 gal. Metal Containers

L856 **WHITE HYDROSEAL No. 599**
12 oz. Cups, 1¾″, 3½″, 14 and 70 lb. Metal Containers

L857 **STANDARD HYDROTITE CAULKING COMPOUND No. 120**
Colours: Buff, Steelgrey, Silvergrey, Red, Green
14 lb. will fill joint 80′ x 1″ x ¼″ or 9 Steel Frame Windows 4′ x 7′
12 ozs. and 2 lb. Cups 7 lb., 14 lb. and 85 lb. Metal Containers and 122 lb. Cases

L858 **SOFT HYDROTITE CAULKING COMPOUND No. 121**
1 lb. and 2½ lb. Cups, 4½, 9, 18 and 90 lb. Metal Containers

L859 **GUN GRADE HYDROTITE CAULKING COMPOUND No. 122**
Application by Standard Caulking Gun
8⅜″ x 2″ Cartridges, 1 and 5 gal. Metal Containers

LADDERS — ALUMINIUM OR WOOD

L869

EXTENSION

LIGHT	MEDIUM
7′ to 12′	13′ to 24′
8′ to 14′	14′ to 26′
9′ to 16′	15′ to 28′
10′ to 18′	16′ to 30′
11′ to 20′	17′ to 31′
12′ to 22′	18′ to 32′
13′ to 24′	
14′ to 26′	

MED. HEAVY	HEAVY
17′ to 31′	24′ to 42′
18′ to 32′	25′ to 44′
19′ to 34′	26′ to 46′
20′ to 36′	27′ to 48′
21′ to 38′	28′ to 50′
22′ to 40′	
24′ to 42′	

L870

BUILDERS & PAINTERS

STANDARD	HEAVY DUTY
8′	16′
9′	18′
10′	20′
11′	22′
12′	24′
13′	26′
14′	
15′	
16′	
18′	
20′	
22′	
24′	
26′	
28′	

L871

EXTENSION STEPS

5′ to 7′6″
6′ to 9′6″
7′ to 11′6″
8′ to 13′6″
9′ to 15′6″

L872

STEPLADDERS

INDUSTRIAL
3′, 4′, 5′, 6′, 7′, 8′, 9′, 10′, 12′, 14′, 16′, 18′

LIGHT DUTY
3′, 4′, 5′, 6′, 7′, 8′

L873

PLATFORM STEPS

Platform Height
3′, 4′, 5′, 6′, 7′, 8′, 10′, 12′, 14′, 16′

L874

PLANKS

— bound ends,
6′, 7′, 8′, 9′, 10′, 12′, 14′

L875

COMBINATION TRESTLE

and Stepladder with Platform

L876

TRESTLES

6′, 7′, 8′, 9′, 10′, 12′, 14′, 16′

L877

LADDER SCAFFOLD BRACKETS

Converts Ladders to Plank Scaffolds

L878 **CEMENT-BUILDERS**
24 Bags to Ton

L879 **CEMENT-FIRE CLAY**
24 Bags to Ton

L880 **BRICKTOR**
3″ wide x 50 yd. Rolls

L881 **HYDRATED LIME**
Bag Lots

L882 **BUILDERS SAND**
Bag Lots

L883 **BUILDING TIES**
Ceiling, Frame, Veneer, Wall, Ceiling Dogs

L884 **BYCOL**
Liquid Ball Bearings, 1 gal. 4 gal.

L885 **FIRE BRICKS**
Standard or Arch

OFFICIAL N.S.W. DISTRIBUTORS OF

"Baker's" SOLDERING FLUID & FLUXES

- Supersedes killed spirits
- Supplied in convenient tin for safe storage
- Economical in use
- Suitable for all types of soldering

L886 **"BAKER'S" STANDARD SOLDERING FLUID**
4 oz., 8 oz., 20 oz., ¼ gal., ½ gal., 1 gal. Tins, 4 gal., 44 gal. Drums

L887 **"BAKER'S" SOLDERINE PASTE FLUX**
3 oz. and 16 oz. Tins

L888 **"BAKER'S" F.A. FLUID** — For Stainless Steel,
1 pint Bottles

L889 **"BAKER'S" No. 47 FLUID** — For Zinc Anneal & Zinc Tin Sheets
1 pint Bottles, 1 gallon Bottles

L890 **"BAKER'S" "BURNAX" LIQUID FLUX**
Absolutely non-corrosive under all conditions. Approved by Department of Civil Aviation for use on Aircraft. **20 oz. Tins.**

L891 **"BAKER'S" SOLDERING SALTS**
No. 1 Most suitable for Iron and Steel. Dilution in water — **4 lbs. per gal.**
No. 2 Most suitable for Non-Ferrous Metals. Dilution in water, Brass or Copper — **3 lb. per gal.**
Tinned Metals, **2 lb. per gal.**
No. 3 Salts are best used Dry on the Surface of Molten Metals or in Soldering Machines.

L892 **BEARING FLUX** — Powder
1 lb. Tins

L893 **SOLDER STICKS** — Tin-Lead
40-60, 50-50, 60-40, 8 oz. Sticks

L894 **SOLDER STRIPS** — Tin-Lead
50-50, ⅛" wide

L895 **SOLDER ACID CORED** — Tin-Lead
40-60, 10g. or ⅛, 1 lb. Spool

L896 **SOLDER RESINCORED** — Tin-Lead
50-50 10g., 13g., 16g., 1 lb. Spool

L897 **SOLDER MULTI CORED** — Tin-Lead
50-50, 60-40, 10g., 13g., 16g., 1 lb. Spool

L898 **SOLDER WIRE — 10g. or ⅛"** Tin-Lead
50-50, 95T-5A, 1 lb. Spool

L899 **WIPING METAL** — Tin-Lead
30-70, 35-65, 8 oz. Sticks

L900 **SPELTER**
Granulated Loose

SPANNERS—DROP FORGED

L 901 DOUBLE ENDED

Head inclined 30

WHITWORTH NUT SIZE		WHITWORTH NUT SIZE	
Old Standard (Not in common use)	New Standard (BS.916-1083 1940)	Old Standard (Not in common use)	New Standard (BS.916-1083 1940)
1/8" x 3/16"	3/16" x 1/4"	5/8" x 11/16"	11/16" x 3/4"
1/8" x 1/4"	3/16" x 5/16"	5/8" x 3/4"	11/16" x 7/8"
3/16" x 1/4"	1/4" x 5/16"	11/16" x 3/4"	3/4" x 7/8"
3/16" x 5/16"	1/4" x 3/8"	11/16" x 13/16"	3/4" x 15/16"
1/4" x 5/16"	5/16" x 3/8"	3/4" x 7/8"	7/8" x 1"
1/4" x 3/8"	5/16" x 7/16"	7/8" x 1"	1" x 1 1/8"
5/16" x 3/8"	3/8" x 7/16"	1" x 1 1/4"	1 1/8" x 1 1/4"
5/16" x 7/16"	3/8" x 1/2"	1" x 1 3/8"	1 1/8" x 1 3/8"
3/8" x 7/16"	7/16" x 1/2"	1 1/8" x 1 1/4"	1 1/4" x 1 3/8"
3/8" x 1/2"	7/16" x 9/16"	1 1/4" x 1 3/8"	1 3/8" x 1 1/2"
7/16" x 1/2"	1/2" x 9/16"	1 1/4" x 1 1/2"	1 3/8" x 1 5/8"
7/16" x 9/16"	1/2" x 5/8"	1 3/8" x 1 1/2"	1 1/2" x 1 5/8"
1/2" x 9/16"	9/16" x 5/8"	1 1/2" x 1 5/8"	1 5/8" x 1 3/4"
1/2" x 5/8"	9/16" x 11/16"	1 1/2" x 1 3/4"	1 3/8" x 2"
9/16" x 5/8"	5/8" x 11/16"	1 5/8" x 1 3/4"	1 3/4" x 2"
9/16" x 11/16"	5/8" x 3/4"	1 3/4" x 1 7/8"	2" x —
		1 3/4" x 2"	2" x 2 1/4"

L 902 SINGLE ENDED

Head inclined 30

WHITWORTH NUT SIZE	
Old Standard (Not in common use)	New Stand. (BS.916 1940)
1/8"	3/16"
3/16"	1/4"
1/4"	5/16"
5/16"	3/8"
3/8"	7/16"
7/16"	1/2"
1/2"	9/16"
9/16"	5/8"
5/8"	11/16"
11/16"	3/4"
3/4"	7/8"
13/16"	15/16"
7/8"	1"
15/16"	—
1"	1 1/8"
1 1/8"	1 1/4"
1 1/4"	1 3/8"
1 3/8"	1 1/2"
1 1/2"	1 5/8"
1 5/8"	1 3/4"
1 3/4"	2"
1 7/8"	—
2"	2 1/4"
2 1/8"	—
2 1/4"	2 1/2"

L 903 PODGER CONSTRUCTION

WHITWORTH NUT SIZE		
Old Standard (Not in common use)	New Standard (BS.916 1940)	Length Overall
1/4"	5/16"	9 1/2"
5/16"	3/8"	10 1/2"
3/8"	7/16"	13"
7/16"	1/2"	13"
1/2"	9/16"	16"
9/16"	5/8"	16"
5/8"	11/16"	17 1/2"
11/16"	3/4"	17 1/2"
3/4"	7/8"	18 3/4"
13/16"	15/16"	18 3/4"
7/8"	1"	20"
15/16"	—	—
1"	1 1/8"	23"
1 1/8"	1 1/4"	23"
1 1/4"	1 3/8"	25"
1 3/8"	1 1/2"	25"

L 905

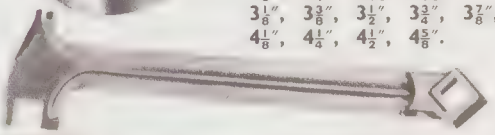
STRIKING FACE (FLOGGING)

Whitworth Bolt Sizes:

1", 1 1/8", 1 1/4", 1 3/8", 1 1/2",

A.F. Sizes:

1 1/4", 1 5/16", 1 7/16", 1 1/2", 1 5/8", 1 11/16", 1 13/16", 1 7/8", 2", 2 1/16", 2 3/16", 2 1/4", 2 3/8", 2 7/16", 2 9/16", 2 5/8", 2 3/4", 2 13/16", 2 15/16", 3", 3 1/8", 3 3/8", 3 1/2", 3 3/4", 3 7/8", 4 1/8", 4 1/4", 4 1/2", 4 5/8".

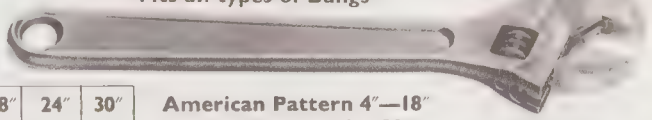


L 904 PODGER RING:

Sizes 5/16" to 1 1/2" Whitworth

L 906 UNIVERSAL BUNG WRENCH

Fits all types of Bungs



L 907 ADJUSTABLE SPANNERS

Overall Sizes	4"	6"	8"	10"	12"	15"	18"	24"	30"
Maximum Jaw Opening	1/2"	3/4"	15/16"	1 1/8"	1 5/16"	1 3/4"	2 1/4"	2 7/16"	3 1/8"

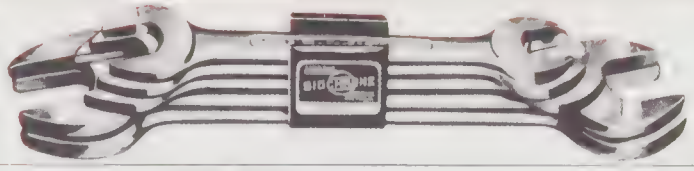
American Pattern 4"—18"
Swedish Pattern 4"—30"

Spare parts available—Knurl, Spring, Pin, Jaw.
Black or Chrome Finish

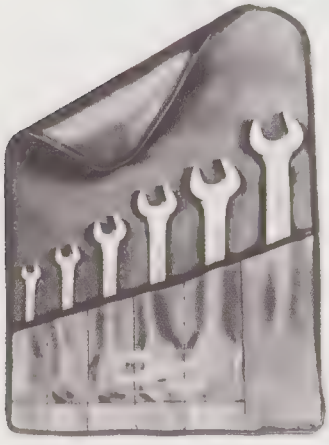
SPANNERS—CHROME VANADIUM

L 908 Open End (Individual Sizes)

Whitworth (Old Standard)	A.F. (S.A.E.)	Metric	Whitworth (Old Standard)	A.F. (S.A.E.)	Metric
1/8" x 3/16"	1/4" x 5/16"	4 mm x 5 mm	11/16" x 13/16"	1 1/16" x 1 1/4"	18 mm x 19 mm
3/16" x 1/4"	5/16" x 3/8"	6 mm x 7 mm	3/4" x 7/8"	1 1/8" x 1 1/4"	20 mm x 22 mm
1/4" x 5/16"	3/8" x 7/16"	8 mm x 9 mm	7/8" x 1"	1 1/8" x 1 5/16"	21 mm x 23 mm
5/16" x 3/8"	7/16" x 1/2"	8 mm x 10 mm	1" x 1 1/8"	1 3/16" x 1 5/16"	24 mm x 29 mm
3/8" x 7/16"	1/2" x 9/16"	8 mm x 12 mm	1 1/8" x 1 1/4"	1 1/4" x 1 5/16"	25 mm x 30 mm
3/8" x 1/2"	9/16" x 5/8"	8 mm x 13 mm	1 3/8" x 1 1/2"	1 1/4" x 1 3/8"	26 mm x 31 mm
7/16" x 1/2"	5/8" x 11/16"	9 mm x 11 mm	1 5/8" x 1 3/4"	1 1/4" x 1 7/16"	27 mm x 32 mm
7/16" x 9/16"	5/8" x 3/4"	10 mm x 11 mm	1 3/4" x 2"	1 5/16" x 1 1/2"	28 mm x 35 mm
1/2" x 9/16"	11/16" x 3/4"	12 mm x 13 mm		1 3/8" x 1 1/2"	
1/2" x 5/8"	3/4" x 7/8"	12 mm x 14 mm		1 7/16" x 1 5/8"	
9/16" x 5/8"	13/16" x 7/8"	13 mm x 15 mm		1 1/2" x 1 5/8"	
9/16" x 11/16"	7/8" x 15/16"	14 mm x 15 mm		1 5/8" x 1 3/4"	
5/8" x 11/16"	15/16" x 1"	16 mm x 17 mm		1 11/16" x 1 7/8"	
5/8" x 3/4"	15/16" x 1 1/16"	16 mm x 18 mm		1 13/16" x 2"	
11/16" x 3/4"	1 1/16" x 1 1/8"	17 mm x 19 mm		1 3/4" x 2 1/16"	



L 909 SPANNER SETS
OPEN END



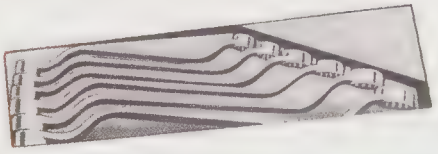
Set No.	Individual Sizes
WHITWORTH (Old Standard)	**IN METAL CLIP**
83-6	1/8" x 3/16", 3/16" x 1/4", 1/4" x 5/16", 5/16" x 3/8"
84-4	1/8" x 3/16", 1/4" x 5/16", 3/8" x 7/16", 1/2" x 5/8"
85-2	1/8" x 3/16", 1/4" x 5/16", 3/8" x 7/16", 1/2" x 9/16"
86-0	1/8" x 3/16", 3/16" x 1/4", 1/4" x 5/16", 5/16" x 3/8", 3/8" x 7/16", 7/16" x 1/2", 1/2" x 5/8"
87-9	1/8" x 3/16", 3/16" x 1/4", 1/4" x 5/16", 5/16" x 3/8", 3/8" x 7/16", 7/16" x 1/2", 1/2" x 9/16"
88-7	1/8" x 3/16", 1/4" x 5/16", 5/16" x 3/8", 3/8" x 7/16", 1/2" x 9/16"
WHITWORTH (Old Standard)	**IN PLASTIC ROLL**
89-5	1/8" x 3/16", 3/16" x 1/4", 1/4" x 5/16", 5/16" x 3/8", 3/8" x 7/16", 1/2" x 5/8"
90-8	1/8" x 3/16", 3/16" x 1/4", 1/4" x 5/16", 5/16" x 3/8", 3/8" x 7/16", 1/2" x 9/16"
A.F. (S.A.E.)	**IN METAL CLIP**
55-3	1/4" x 5/16", 3/8" x 7/16", 1/2" x 9/16", 5/8" x 11/16"
56-1	1/4" x 5/16", 3/8" x 7/16", 1/2" x 9/16", 5/8" x 11/16", 3/4" x 7/8", 15/16" x 1"
58-8	1/4" x 5/16", 5/16" x 3/8", 3/8" x 7/16", 7/16" x 1/2", 1/2" x 9/16", 9/16" x 5/8"
59-6	5/8" x 11/16", 11/16" x 3/4", 3/4" x 7/8", 15/16" x 1", 15/16" x 1 1/16"
60-9	1/4" x 5/16", 3/8" x 7/16", 7/16" x 1/2", 1/2" x 9/16", 9/16" x 5/8", 3/4" x 7/8", 15/16" x 1"
A.F. (S.A.E.)	**IN PLASTIC ROLL**
61-7	1/4" x 5/16", 3/8" x 7/16", 1/2" x 9/16", 5/8" x 11/16", 3/4" x 7/8", 15/16" x 1"
METRIC	**IN METAL CLIP**
106-2	8 mm x 10 mm, 9 mm x 11 mm, 12 mm x 14 mm, 13 mm x 15 mm
107-0	8 mm x 10 mm, 9 mm x 11 mm, 12 mm x 14 mm, 13 mm x 15 mm, 16 mm x 18 mm, 17 mm x 19 mm
108-9	8 mm x 10 mm, 9 mm x 11 mm, 12 mm x 14 mm, 13 mm x 15 mm, 16 mm x 18 mm, 17 mm x 19 mm, 20 mm x 22 mm, 21 mm x 23 mm
B.A.	**SET IN WALLET**
FBA 5L	0 x 2, 1 x 3, 4 x 6, 5 x 7, 8 x 10

SPANNERS — CHROME VANADIUM

L910 RING SPANNERS (Individual Sizes)

Whitworth	Bolt Size	A/F (S.A.E.)	METRIC
$\frac{1}{8}$" x $\frac{3}{16}$"	— x $\frac{1}{4}$"	$\frac{1}{4}$" x $\frac{5}{16}$"	6 mm x 7 mm
$\frac{3}{16}$" x $\frac{1}{4}$"	$\frac{1}{4}$" x $\frac{5}{16}$"	$\frac{5}{16}$" x $\frac{3}{8}$"	8 mm x 9 mm
$\frac{1}{4}$" x $\frac{5}{16}$"	$\frac{5}{16}$" x $\frac{3}{8}$"	$\frac{3}{8}$" x $\frac{7}{16}$"	10 mm x 11 mm
$\frac{5}{16}$" x $\frac{3}{8}$"	$\frac{3}{8}$" x $\frac{7}{16}$"	$\frac{7}{16}$" x $\frac{1}{2}$"	12 mm x 13 mm
$\frac{3}{8}$" x $\frac{7}{16}$"	$\frac{7}{16}$" x $\frac{1}{2}$"	$\frac{1}{2}$" x $\frac{9}{16}$"	14 mm x 15 mm
$\frac{3}{8}$" x $\frac{1}{2}$"	$\frac{7}{16}$" x $\frac{9}{16}$"	$\frac{9}{16}$" x $\frac{5}{8}$"	16 mm x 17 mm
$\frac{7}{16}$" x $\frac{1}{2}$"	$\frac{1}{2}$" x $\frac{9}{16}$"	$\frac{9}{16}$" x $\frac{11}{16}$"	18 mm x 19 mm
$\frac{7}{16}$" x $\frac{9}{16}$"	$\frac{1}{2}$" x $\frac{5}{8}$"	$\frac{5}{8}$" x $\frac{11}{16}$"	20 mm x 22 mm
$\frac{1}{2}$" x $\frac{9}{16}$"	$\frac{9}{16}$" x $\frac{5}{8}$"	$\frac{5}{8}$" x $\frac{3}{4}$"	21 mm x 23 mm
$\frac{1}{2}$" x $\frac{5}{8}$"	$\frac{9}{16}$" x $\frac{11}{16}$"	$\frac{11}{16}$" x $\frac{3}{4}$"	24 mm x 26 mm
$\frac{9}{16}$" x $\frac{5}{8}$"	$\frac{5}{8}$" x $\frac{11}{16}$"	$\frac{3}{4}$" x $\frac{25}{32}$"	25 mm x 28 mm
$\frac{9}{16}$" x $\frac{11}{16}$"	$\frac{5}{8}$" x $\frac{3}{4}$"	$\frac{3}{4}$" x $\frac{7}{8}$"	27 mm x 29 mm
$\frac{5}{8}$" x $\frac{11}{16}$"	$\frac{11}{16}$" x $\frac{3}{4}$"	$\frac{13}{16}$" x $\frac{7}{8}$"	27 mm x 32 mm
$\frac{5}{8}$" x $\frac{3}{4}$"	$\frac{11}{16}$" x $\frac{7}{8}$"	$\frac{15}{16}$" x 1"	30 mm x 32 mm
$\frac{11}{16}$" x $\frac{3}{4}$"	$\frac{3}{4}$" x $\frac{7}{8}$"	1" x 1$\frac{1}{8}$"	
$\frac{3}{4}$" x $\frac{7}{8}$"	$\frac{7}{8}$" x 1"	1$\frac{1}{16}$" x 1$\frac{1}{8}$"	
$\frac{7}{8}$" x 1"	1" x 1$\frac{1}{8}$"	1$\frac{1}{16}$" x 1$\frac{1}{4}$"	
1" x 1$\frac{1}{8}$"	1$\frac{1}{8}$" x 1$\frac{1}{4}$"	1$\frac{1}{8}$" x 1$\frac{1}{4}$"	
1$\frac{1}{8}$" x 1$\frac{1}{4}$"	1$\frac{1}{4}$" x 1$\frac{3}{8}$"	1$\frac{3}{16}$" x 1$\frac{5}{16}$"	
1$\frac{3}{8}$" x 1$\frac{1}{2}$"	1$\frac{1}{2}$" x 1$\frac{5}{8}$"	1$\frac{1}{4}$" x 1$\frac{3}{8}$"	
1$\frac{5}{8}$" x 1$\frac{3}{4}$"	1$\frac{3}{4}$" x 2"	1$\frac{1}{4}$" x 1$\frac{7}{16}$"	
1$\frac{3}{4}$" x 2"	2" x 2$\frac{1}{4}$"	1$\frac{5}{16}$" x 1$\frac{1}{2}$"	
		1$\frac{3}{8}$" x 1$\frac{1}{2}$"	
		1$\frac{7}{16}$" x 1$\frac{5}{8}$"	
		1$\frac{5}{8}$" x 1$\frac{3}{4}$"	
		1$\frac{11}{16}$" x 1$\frac{7}{8}$"	
		1$\frac{13}{16}$" x 2"	
		1$\frac{3}{4}$" x 2$\frac{1}{16}$"	

L911 RING SPANNER SETS



Set No.	Individual Sizes
WHITWORTH (Old standard) IN METAL CLIP	
141-7	$\frac{1}{8}$" x $\frac{3}{16}$", $\frac{1}{4}$" x $\frac{5}{16}$", $\frac{3}{8}$" x $\frac{7}{16}$"
A.F. (S.A.E.) IN METAL CLIP	
125-7	$\frac{3}{8}$" x $\frac{7}{16}$", $\frac{1}{2}$" x $\frac{9}{16}$", $\frac{5}{8}$" x $\frac{11}{16}$"
METRIC. IN METAL CLIP	
151-3	8 x 10, 9 x 11, 12 x 14
B.A. SET IN WALLET	
CRBA-6L	$\frac{1}{8}$ x 0, 0 x 2, 1 x 3, 2 x 4, 3 x 5, 4 x 6

L912 RING AND OPEN END SPANNERS

WHITWORTH (Old standard)

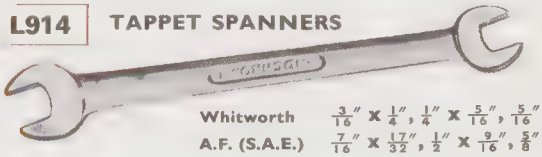
Whitworth	$\frac{1}{8}$"	$\frac{3}{16}$"	$\frac{1}{4}$"	$\frac{5}{16}$"	$\frac{3}{8}$"	$\frac{7}{16}$"	$\frac{1}{2}$"	$\frac{9}{16}$"	$\frac{5}{8}$"	$\frac{11}{16}$"
Bolt Size	$\frac{3}{16}$"	$\frac{1}{4}$"	$\frac{5}{16}$"	$\frac{3}{8}$"	$\frac{7}{16}$"	$\frac{1}{2}$"	$\frac{9}{16}$"	$\frac{5}{8}$"	$\frac{11}{16}$"	$\frac{3}{4}$"
Whitworth	$\frac{3}{4}$"	$\frac{13}{16}$"	$\frac{7}{8}$"	$\frac{15}{16}$"	1"	1$\frac{1}{8}$"	1$\frac{1}{4}$"	1$\frac{3}{8}$"	1$\frac{1}{2}$"	—
Bolt Size	$\frac{7}{8}$"	$\frac{15}{16}$"	1"	1$\frac{1}{16}$"	1$\frac{1}{8}$"	1$\frac{1}{4}$"	1$\frac{3}{8}$"	1$\frac{1}{2}$"	1$\frac{5}{8}$"	—

A.F. (S.A.E.) $\frac{1}{4}$", $\frac{9}{32}$", $\frac{5}{16}$", $\frac{11}{32}$", $\frac{3}{8}$", $\frac{7}{16}$", $\frac{1}{2}$", $\frac{9}{16}$", $\frac{19}{32}$", $\frac{5}{8}$", $\frac{11}{16}$", $\frac{3}{4}$", $\frac{25}{32}$", $\frac{13}{16}$", $\frac{7}{8}$", $\frac{15}{16}$", 1", 1$\frac{1}{16}$", 1$\frac{1}{8}$", 1$\frac{1}{4}$", 1$\frac{5}{16}$", 1$\frac{3}{8}$", 1$\frac{7}{16}$", 1$\frac{1}{2}$", 1$\frac{5}{8}$", 1$\frac{13}{16}$", 2", 2$\frac{3}{16}$", 2$\frac{3}{8}$"

L913 OPEN FRONT RING SPANNERS

A.F./(S.A.E.)	FLARE NUT A.F. SIZE		
	Tube O.D.	Turner (Extruded)	Hudson (Forged)
$\frac{5}{16}$" x $\frac{3}{8}$"	$\frac{1}{8}$"	$\frac{3}{8}$"	—
$\frac{3}{8}$" x $\frac{7}{16}$"	$\frac{3}{16}$"	$\frac{7}{16}$"	$\frac{5}{8}$"
$\frac{3}{8}$" x $\frac{15}{32}$"	$\frac{1}{4}$"	$\frac{1}{2}$"	$\frac{3}{4}$"
$\frac{1}{2}$" x $\frac{9}{16}$"	$\frac{5}{16}$"	$\frac{5}{8}$"	$\frac{3}{4}$"
$\frac{5}{8}$" x $\frac{3}{4}$"	$\frac{3}{8}$"	$\frac{3}{4}$"	$\frac{7}{8}$"
$\frac{3}{4}$" x 1"	$\frac{1}{2}$"	$\frac{7}{8}$"	1"
$\frac{7}{8}$" x 1$\frac{1}{8}$"	$\frac{5}{8}$"	1"	1$\frac{1}{8}$"
	$\frac{3}{4}$"	1$\frac{1}{4}$"	—

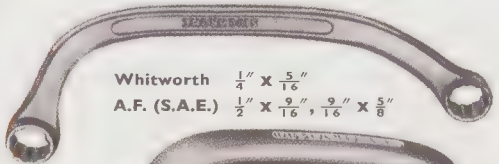
L914 TAPPET SPANNERS



Whitworth $\frac{3}{16}$" x $\frac{1}{4}$", $\frac{1}{4}$" x $\frac{5}{16}$", $\frac{5}{16}$" x $\frac{3}{8}$"

A.F. (S.A.E.) $\frac{7}{16}$" x $\frac{17}{32}$", $\frac{1}{2}$" x $\frac{9}{16}$", $\frac{5}{8}$" x $\frac{11}{16}$"

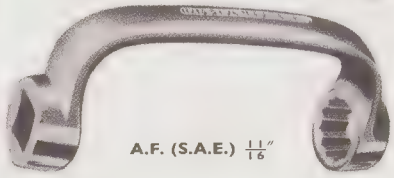
L915 HALF-MOON RING SPANNERS



Whitworth $\frac{1}{4}$" x $\frac{5}{16}$"

A.F. (S.A.E.) $\frac{1}{2}$" x $\frac{9}{16}$", $\frac{9}{16}$" x $\frac{5}{8}$"

L916 CROWFOOT SPANNER



A.F. (S.A.E.) $\frac{11}{16}$"

SOCKETS, SOCKET ACCESSORIES, SOCKET SETS

L918 ¼" SQUARE DRIVE REVERSIBLE RATCHET HANDLE

RATCHET EXTENSION VALVE KEYS

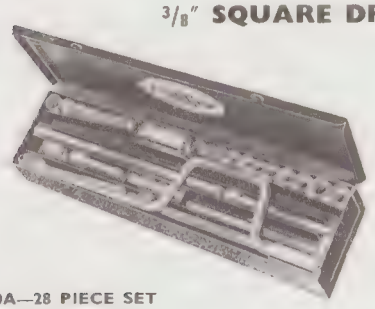
No. 4358	7/16" Square
No. 4359	7/32" Square
No. 4360	¼" Square
No. 4361	5/16" Square
No. 4362	⅜" Square

L919 ⅜" SQUARE DRIVE SOCKETS

Whitworth	Bolt Size	A.F./(S.A.E.)	Metric
1/8"* 3/16" 1/4" 5/16" 3/8"	— 1/4" 5/16" 3/8" 7/16"	5/16"*, 3/8"*, 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16"	5 mm, 6*, 7*, 8*, 9*, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19

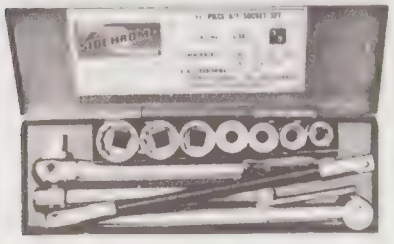
* Single Hexagon

⅜" SQUARE DRIVE SOCKET SETS



80A—28 PIECE SET
B.A. Sockets—0, 1, 2
Whit—⅛, 3/16, ¼, 5/16, ⅜
A/F—⅜, 7/16, 15/32, ½, 17/32, 9/16, 19/32, ⅝, 11/16, ¾, A.F.
Deep for 14 mm Sparking Plugs
Speed Brace, Sliding Offset Handle, Ratchet Handle, Swivel Handle, 1½" T Handle Extension, Universal Joint, 3", 6", 12" Handle Extension.

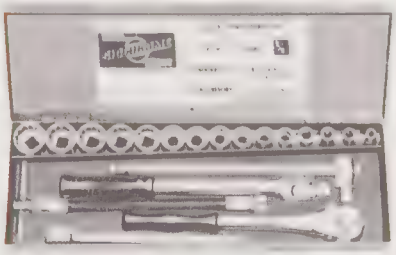
81A — 20 PIECE SET
11 A/F Sockets—⅜, 7/16, 15/32, ½, 17/32, 9/16, 19/32, ⅝, 11/16, ¾
Deep for 14 mm Sparking Plugs
Speed Brace, Sliding Offset Handle, Ratchet Handle, Swivel Handle, 1½" T Handle Extension, Universal Joint, 3", 6", 12" Handle Extension.



208-1—11 PIECE SET
7 A/F Sockets—⅜, 7/16, ½, 9/16, ⅝, 11/16, ¾
Extension 6", Adjustable Offset Handle 9", Sliding Tee Handle 8", Flexible Drive 8".

210-2—12 PIECE SET
7 A/F Sockets—⅜, 7/16, ½, 9/16, ⅝, 11/16, ¾
Extension 6", Adjustable Offset Handle 9", Male Ratchet 7", Sliding Tee Handle 8", Flexible Drive 8".

304-1—12 PIECE SET
7 Metric Sockets, 8, 9, 10, 11, 12, 13, 14 mm.
Extension 6", Adjustable Offset Handle 9", Male Ratchet 7", Sliding Tee Handle 8", Flexible Drive 8".

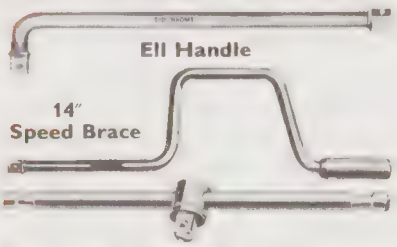


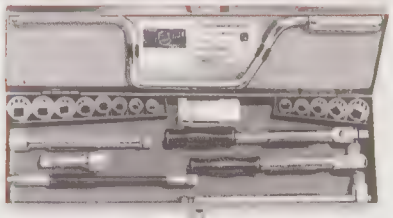
306-8—20 PIECE SET
15 Metric Sockets, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 mm.
Extension 6", Adjustable Offset Handle, 9", Male Ratchet 7", Sliding Tee Handle 8", Flexible Drive 8".

L921 INHEX SOCKETS

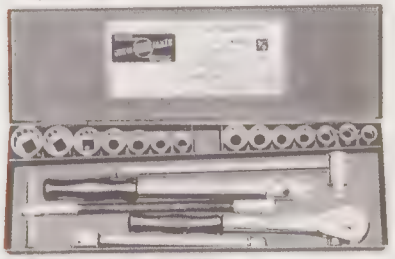
For Recess Head Screws
Hexagon Key Size A.F. 7/32, ¼, 5/16, ⅜, ½, 9/16

L920 ⅜" SQUARE DRIVE SOCKET ACCESSORIES





SWS.3821—21 PIECE SET
8 A/F Sockets—7/16, ⅜, 7/16, ½, 9/16, ⅝, 11/16, ¾.
5 Whit. Sockets—⅛, 3/16, ¼, 5/16, ⅜.
B.S. Equiv.—¼, 5/16, ⅜, 7/16.
1 Spark Plug Socket, 13/16 A/F.
Extension 3", Extension 6", Adjustable Offset Handle, 9", Ratchet, Reversible, Male 7", Sliding Tee Handle 8", Speed Brace 14", Flexible Drive 8".



SMS.3819—19 PIECE SET
7 A/F Sockets—⅜, 7/16, ½, 9/16, ⅝, 11/16, ¾.
7 Metric Sockets—8, 9, 10, 11, 12, 13, 14 mm.
Extension 6", Adjustable Offset Handle, Ratchet, Reversible, Male, Sliding T Handle, Flexible Drive 8".

SOCKETS, SOCKET ACCESSORIES, SOCKET SETS — 1/2" Square Drive

L922 1/2" SQUARE DRIVE SOCKETS

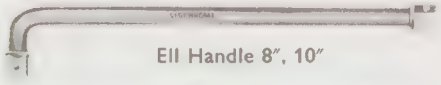
Whitworth	Bolt Size	A/F (S.A.E.) Single Hexagon		A/F (S.A.E.) Double Hexagon		Metric Single Hexagon	Metric Double Hexagon	
3/16"	1/4"	3/8"	3/4"	7/16"	13/16"		11	22
1/4"	5/16"	7/16"	13/16"	1/2"	7/8"	8	12	23
5/16"	3/8"	1/2"	7/8"	9/16"	15/16"	9	13	24
3/8"	7/16"	9/16"	15/16"	19/32"	1"	10mm	14	25
7/16"	1/2"	5/8"	1"	5/8"	1 1/16"		15	26
1/2"	9/16"	11/16"		21/32"	1 1/8"		16	27
9/16"	5/8"			11/16"	1 3/16"		17	28
5/8"	11/16"			3/4"	1 1/4"		18	29
11/16"	3/4"			25/32"			19	30
3/4"	7/8"						20	31
							21	32mm

L923 1/2" SQUARE DRIVE SOCKET ACCESSORIES

M. & F. Extensions 3", 6", 10", 20"

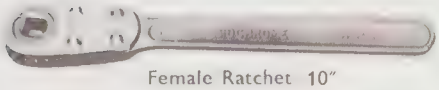
Double Male Extensions 1 9/16", 5"

Adjustable Handles 9", 15"



Ell Handle 8", 10"

Tommy Bar 12"



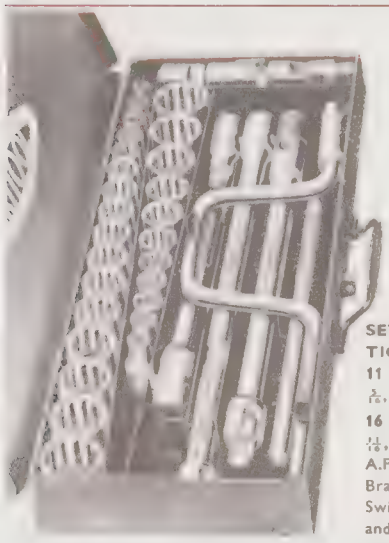
Female Ratchet 10"

Sliding Tee Handle 11"

Male Ratchet Reversible 10"

Speed Brace 16"

Universal Joint



1/2" SQUARE DRIVE SOCKET SETS

SET 100B—37 PIECE COMBINATION SET
11 Whitworth Sockets—1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4.
16 S.A.E. Sockets—7/16, 1/2, 5/16, 13/32, 3/8, 11/16, 3/4, 23/32, 13/16, 7/8, 1", 1 1/16, 1 1/8, 1 3/16, 1 1/4 A.F., Turnscrew Socket Bit, Speed Brace, Bar Handle, Ratchet Handle, Swivel Handle, Universal Joint, 3", 6" and 12" T, Handle Extension, Spark Plug Spanner.

SET 95A — 13 PIECE WHITWORTH SET —
11 Whitworth Sockets—1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4 Bar Handle, Sliding Offset Handle, Ratchet Handle.

SET 96A—20 PIECE S.A.E. SET
16 S.A.E. Sockets—7/16, 1/2, 5/16, 13/32, 3/8, 11/16, 3/4, 23/32, 13/16, 7/8, 15/16, 1", 1 1/16, 1 1/8, 1 3/16, 1 1/4, A.F., Bar Handle, Sliding Offset Handle, Ratchet Handle, and 6" T Handle Extension.

SET 98A—16 PIECE METRIC SET
12 Metric Sockets—10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32 mm, Bar Handle, Sliding Offset Handle, Ratchet Handle and T Handle Extension 6".

SOCKET SETS — 1/2″ SQUARE DRIVE

A.F. (S.A.E.)

221-7—8 PIECE SET
7 Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8
Adjustable Offset Handle, 9″.

223-3—7 PIECE SET
6 Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4 . A.F.
Ell Handle, 8″.

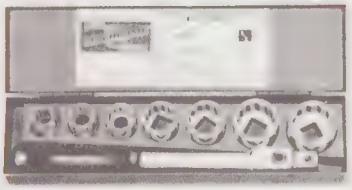
224-1—14 PIECE SET
10 SOCKETS—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 15/16, 1″, 1 1/16 A.F.
Extension 6″, Adjustable Offset Handle, 9″, Tommy Bar, Ratchet, Reversible Male, 10″.

226-8—17 PIECE SET
12 Sockets—7/16, 1/2, 9/16, 5/8, 23/32, 11/16, 3/4, 13/16, 7/8, 15/16, A.F.
Extension 6″, Tommy Bar, Ratchet, Female 12″, Adaptor, Double Male 1 9/16″, Ell Handle 10″.

227-6—21 PIECE SET
13 Sockets—3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1″, 1 1/16, 1 1/8, A.F.
Extension 6″, Extension 10″, Adjustable Offset Handle 15″, Tommy Bar, Ratchet, Reversible Male 10″. Sliding Tee Handle 11″, Speed Brace 16″, Universal Joint.

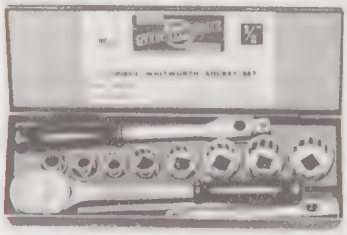
228-4—15 PIECE SET
12 Sockets—7/16, 1/2, 9/16, 5/8, 23/32, 11/16, 3/4, 13/16, 7/8, 15/16, 1″, 1 1/16.
Spark Plug Socket 14 mm, Adjustable Offset Handle 15″.

WHITWORTH



272-7—8 PIECE SET
7 Sockets—Whit.—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 15/16.
B.S. Equiv.—1/2, 9/16, 5/8, 11/16, 3/4, 15/16, 1″.
Adjustable Offset Handle 9″.

273-5—6 PIECE SET
5 Sockets—Whit.—7/16, 1/2, 9/16, 5/8, 3/4
B.S. Equiv.—1/2, 9/16, 5/8, 11/16, 3/4.
Ell Handle, 8″.



274-3—12 PIECE SET
8 Sockets—Whit.—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 15/16, 1″.
B.S. Equiv.—1/2, 9/16, 5/8, 11/16, 3/4, 15/16, 1″, 1 1/16.
Extension 6″, Adjustable Offset Handle, 9″, Tommy Bar, Ratchet, Reversible Male 10″.

275-1—13 PIECE SET
8 Sockets—Whit.—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 15/16, 1″.
B.S. Equiv.—1/2, 9/16, 5/8, 11/16, 3/4, 15/16, 1″, 1 1/16.
Extension 6″, Tommy Bar, Ratchet, Female 12″, Adaptor, Double Male 1 9/16″, Ell Handle 10″.

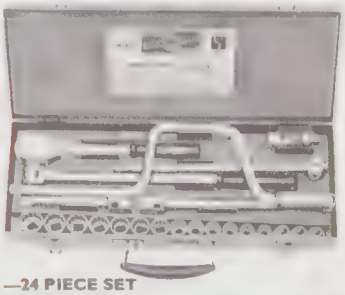
METRIC

316-4—8 PIECE SET
7 Sockets—10, 11, 12, 13, 14, 17, 19 mm.
Adjustable Offset Handle 9″.

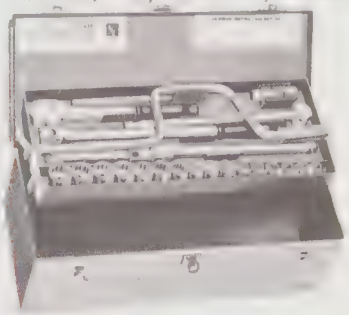
317-2—7 Sockets in Carton—10, 11, 12, 13, 14, 17, 19 mm.

318-0—14 PIECE SET
13 Sockets—10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 mm.
Adjustable Offset Handle, 9″.

319-9—21 PIECE SET
16 Sockets—8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 mm.
Extension 6″, Adjustable Offset Handle 9″, Tommy Bar, Ratchet, Female 12″, Adaptor, Double Male 1 9/16″.



320-1 —24 PIECE SET
16 Sockets—8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 mm.
Extension 6″, Extension 10″, Adjustable Offset Handle 15″, Tommy Bar, Ratchet, Reversable Male 10″. Sliding Tee Handle, 11″. Speed Brace 16″, Universal Joint.



322-8—24 PIECE SET
In Mechanic's Steel Tool Box, 18″ x 7 1/8″ x 7 1/8″, with Cantilever Tray and ample space for additional tools.
16 Sockets—8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 mm.
Extension 6″, Extension 10″, Adjustable Offset Handle 15″, Tommy Bar, Ratchet, Reversible, Male, 10″, Sliding Tee Handle, 11″. Speed Brace 16″, Universal Joint.

COMBINATION SOCKET AND SPANNER SETS—1/2″ Square Drive

COMBINATION SOCKET SETS

412-4—17 PIECE SET

7 A/F Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8
7 Whit. Sockets—7/16, 1/2, 9/16, 5/8, 7/16, 1/2, 9/16
B.S. Equiv.—1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8.
Extension 6″, Sliding Tee Handle 11″, Universal Joint.

413-2—15 PIECE SET

7 A/F Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8.
7 Whit. Sockets—9/16, 1/2, 9/16, 5/8, 7/16, 1/2, 9/16.
B.S. Equiv.—1/2, 7/16, 5/8, 7/16, 1/2, 9/16, 5/8.
Adjustable Offset Handle, 15″.

414-0—27 PIECE SET

In attractive Metal Box with Carrying Handle.
11 A/F Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1″, 1 1/16.
8 Whit. Sockets—9/16, 1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8.
B.S. Equiv.—1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8, 11/16.
Extension 6″, Extension 10″, Adjustable Offset Handle, 15″, Tommy Bar, Ratchet, Reversible Male, 10″, Sliding Tee Handle 11″, Speed Brace 16″, Universal Joint.

415-9—27 PIECE SET

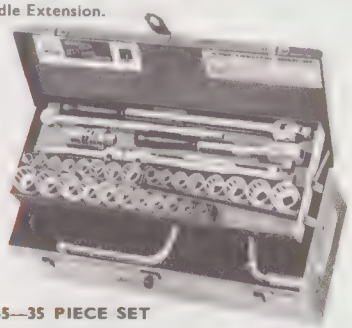
In Mechanics' Steel Tool Box, 18″ x 7 1/2″ x 7 1/2″, with Cantilever Tray and ample space for additional tools. Contents same as 414-0.

416-7—32 PIECE SET

14 A/F Sockets—3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 15/16, 1″, 1 1/16, 1 1/8, 1 3/16, 1 1/4.
10 Whit. Sockets—7/16, 1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4.
B.S. Equiv.—1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8.
1 Spark Plug Socket—13/16 A/F.
Extension 6″, Extension 10″, Adjustable Offset Handle 15″, Ratchet, Reversible Male 10″, Sliding Tee Handle 11″, Speed Brace 16″, Universal Joint.

145B—77 PIECE SET

11 Whit. Sockets—1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4.
17 A/F (S.A.E.) Sockets—7/16, 1/2, 9/16, 13/32, 5/8, 29/32, 11/16, 3/4, 31/32, 1 3/32, 7/8, 15/16, 1″, 1 1/16, 1 1/8, 1 3/16, 1 1/4.
22 Metric Sockets—10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32 mm.
2 Spark Plug Deep Sockets—14 mm, 18 mm.
10 Bisquare Sockets—3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 1″.
Turnscrew Socket Bit, Speed Brace—1/4 x 12″ and 3/8 x 8″ Bar Handles, Short T Adaptor, Ratchet Unit, Offset Handle, Ratchet Handle, Swivel Handle, Universal Joint, Stud Extractor, 3″, 6″, 12″, 18″ T Handle Extension.



417-5—35 PIECE SET

In Mechanics' Steel Tool Box, 18″ x 7 1/2″ x 7 1/2″, with Cantilever Tray and space for extra tools.
11 A/F Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1″, 1 1/16″.
8 Whit. Sockets—9/16, 1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8.
B.S. Equiv.—1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8, 11/16.
8 Metric Sockets—10, 11, 12, 13, 14, 17, 19, 22 mm.
Extension 6″, Extension 10″, Adjustable Offset Handle 15″, Tommy Bar, Ratchet, Reversible Male 10″, Sliding Tee Handle, 11″, Speed Brace, 16″, Universal Joint.

COMBINED SPANNER AND SOCKET SETS

350-0—27 PIECES—A/F (S.A.E.) KIT

6 Open End Spanners—1/4x7/16, 5/16x7/16, 1/4x9/16, 5/16x11/16, 3/8x1/2, 11/16x1″, A/F.
6 Ring Spanners—5/16x7/16, 1/4x9/16, 5/16x11/16, 3/8x29/32, 11/16x1/2, 11/16x1″, A/F.
11 Sockets—3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1″, A/F.
Extension 3″, Extension 10″, Ratchet, Reversible, Male, 10″. Sliding Tee Handle 11″.

370-3—20 PIECES WHITWORTH KIT

4 Open End Spanners
Whit.—1/4x9/16, 5/16x11/16, 3/8x3/4, 1/2x15/16.
B.S.—1/4, 7/16x3/8, 7/16x1/2, 9/16x5/8.
4 Ring Spanners—Whit. 1/4x9/16, 1/4x11/16, 3/8x3/4, 1/2x15/16.
8 Sockets—Whit.—7/16, 1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8.
B.S.—1/2, 9/16, 5/8, 7/16, 1/2, 9/16, 5/8, 11/16.
Extension 3″, Extension 10″, Ratchet, Reversible, Male, 10″. Sliding Tee Handle, 11″.

390-6—28 PIECE METRIC KIT

6 Open End Spanners—8x10, 9x11, 12x14, 13x15, 16x18, 17x19 mm.
6 Ring Spanners—8x9, 10x11, 12x13, 14x15, 16x17 18x19 mm.
12 Sockets—8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 mm.
Extension 3″, Extension 10″, Ratchet, Reversible, Male, 10″. Sliding Tee Handle 11″.

COMBINED SOCKET, RING AND OPEN END SPANNER SETS

349-8—11 PIECE SET

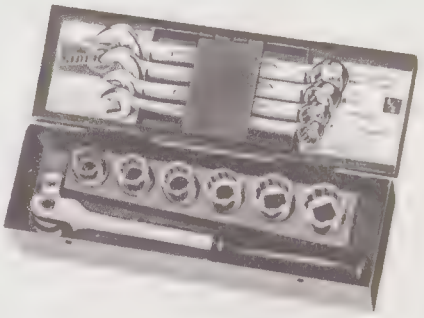
6 A/F Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, A/F.
Adjustable Offset Handle, 9″.
4 Ring and Open End Spanners— 5/8, 7/16, 1/2, 9/16, A/F

369-0—10 PIECE SET

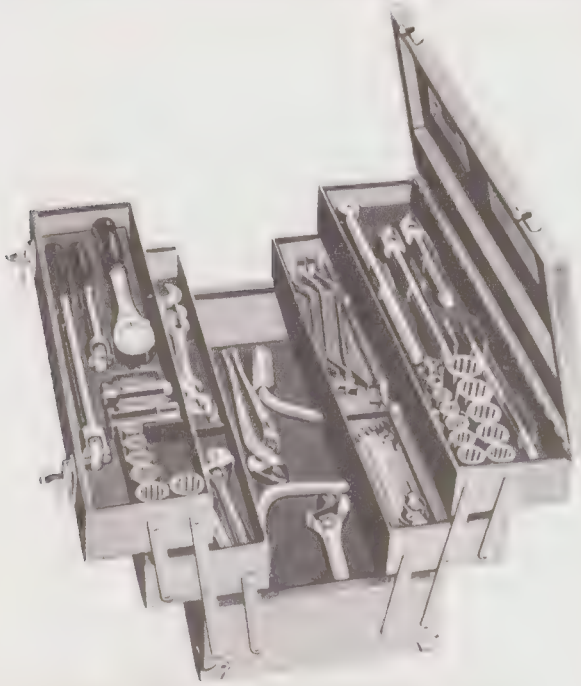
5 Sockets—Whit.—5/16, 3/8, 7/16, 1/2, 9/16.
B.S.— 3/8, 7/16, 1/2, 9/16, 5/8.
Adjustable Offset Handle, 9″
4 Ring and Open End Spanners—Whit.—1/2, 9/16 5/8, 11/16.

389-3—11 PIECE SET

6 Metric Sockets—11, 12, 14, 17, 19, 22 mm.
Adjustable Offset Handle 9″.
4 Ring and Open End Spanners—10, 12, 14, 16 mm.



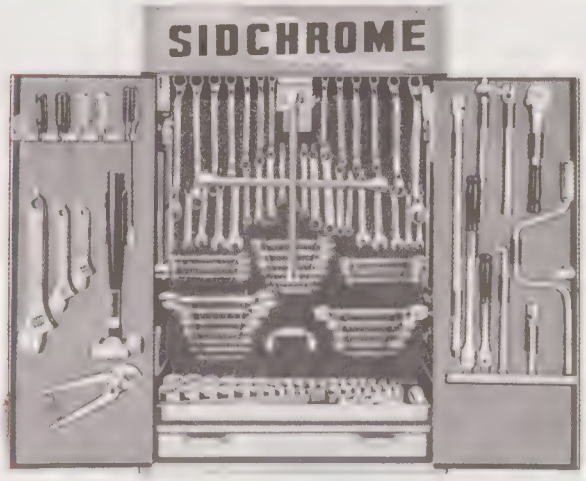
SIDCHROME TOOL CHESTS AND CABINETS — 1/2″ Square Drive



1-9 TOOL CHEST 52 PIECE COMBINATION

A/F Sizes
6 Open End Spanners—$\frac{1}{4}$″-1″.
1 Tappet Spanner—$\frac{1}{4}$″ x $\frac{5}{16}$″.
6 Ring Spanners—$\frac{3}{8}$″-1″
12 Sockets—$\frac{3}{8}$″-1$\frac{1}{16}$″.

Whitworth Sizes
4 Open End Spanners—$\frac{1}{4}$″-$\frac{3}{8}$″ Bolt Size.
4 Ring Spanners—$\frac{1}{4}$″-$\frac{3}{8}$″ Bolt Size.
6 Sockets—$\frac{1}{4}$″-$\frac{25}{64}$″ Bolt Size.
Spark plug Socket—14 mm./$\frac{13}{16}$″ A.F.,
2 Adjustable Wrenches—6″ and 12″.
10″ Multi-Grip Pliers 6″ and 10″ Extension, 9″ and 15″ Offset Handle, Tommy Bar, Reversible Ratchet, Sliding Tee Handle, Speed Brace, Universal Joint.



4-3 TOOL CABINET 139 PIECE COMBINATION

A/F Sizes
7 Open End Spanners—$\frac{1}{4}$″-1″.
3 Tappet Spanners—$\frac{7}{16}$″-1$\frac{1}{16}$″
8 Ignition Spanners—$\frac{7}{32}$″-$\frac{5}{16}$″.
7 Ring Spanners—$\frac{3}{8}$″-1″.
3 Dwarf Ring Spanners—$\frac{3}{8}$″-1$\frac{1}{16}$″.
5 Ring and Open End Spanners—$\frac{3}{8}$″-$\frac{5}{8}$″.
18 Sockets—$\frac{3}{8}$″-1$\frac{1}{4}$″.

Whitworth Sizes
5 Open End Spanners—$\frac{1}{4}$″-$\frac{5}{8}$″ Bolt Size.
3 Tappet Spanners—$\frac{1}{4}$″-$\frac{7}{16}$″ Bolt size.
6 Ring Spanners—$\frac{1}{4}$″-$\frac{3}{8}$″ Bolt Size.
3 Dwarf Ring Spanners—$\frac{1}{4}$″-$\frac{1}{2}$″ Bolt Size.
5 Ring and Open End Spanners —$\frac{1}{4}$″-$\frac{7}{16}$″, Bolt Size.
10 Sockets—$\frac{1}{4}$″-$\frac{3}{8}$″ Bolt Size.

Metric Sizes
6 Open End Spanners—8-19 mm.
4 Dwarf Ring Spanners—8-19 mm.
7 Sockets—10-19 mm.
4-Way Wheel Brace A/F.
Spark Plug Socket—14 mm/$\frac{13}{16}$″ A/F.
Crowfoot Spanner—1$\frac{1}{16}$″ A/F.
3 Adjustable Wrenches—6″, 8″ and 12″.
10″ Multi-grip Pliers, 3″, 6″, 10″ and 20″ Extension, 7 Screwdrivers, 10 Punches, Hack Saw, Ball Pein Hammer, Tension Wrench, 9″ and 15″ Offset Handle, Tommy Bar, Reversible Ratchet, Sliding Tee Handle, Ell Handle, Speed Brace, Universal Joint.

2-7 TOOL CHEST 90 PIECE COMBINATION

A/F Sizes
11 Open End Spanners—$\frac{1}{4}$″-1$\frac{1}{16}$″.
3 Tappet Spanners—$\frac{7}{16}$″-1$\frac{1}{16}$″.
8 Ignition Spanners—$\frac{7}{32}$″-$\frac{5}{16}$″.
6 Ring Spanners—$\frac{3}{8}$″-1″.
6 Ring and Open End Spanners—$\frac{3}{8}$″-1$\frac{1}{16}$″.
15 Sockets—$\frac{7}{16}$″-1$\frac{1}{8}$″.

Whitworth Sizes
7 Open End Spanners—$\frac{1}{4}$″-$\frac{5}{8}$″ Bolt Size.
3 Tappet Spanners—$\frac{1}{4}$″-$\frac{7}{16}$″ Bolt Size.
4 Ring Spanners—$\frac{1}{4}$″-$\frac{5}{8}$″ Bolt Size.
5 Ring and Open End Spanners—$\frac{1}{4}$″-$\frac{7}{16}$″ Bolt Size.
8 Sockets—$\frac{1}{4}$″-1$\frac{1}{16}$″ Bolt Size.
Spark Plug Socket—14 mm/$\frac{13}{16}$ A/F.
2 Adjustable Wrenches—6″ and 12″.
10″ Multi-grip Pliers—6″ and 10″ Extension, 9″ and 15″ Offset Handle, Tommy Bar, Reversible Ratchet, Sliding Tee Handle, Ell Handle, Speed Brace, Universal Joint.

3-5 TOOL CHEST 91 PIECE COMBINATION

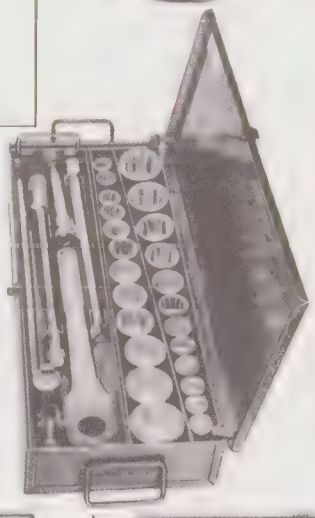
A/F Sizes
11 Open End Spanners—$\frac{1}{4}$″-1$\frac{1}{16}$″.
3 Tappet Spanners—$\frac{7}{16}$″-1$\frac{1}{16}$″.
8 Ignition Spanners—$\frac{7}{32}$″-$\frac{5}{16}$″.
6 Ring Spanners—$\frac{3}{8}$″-1″.
6 Ring and Open End Spanners—$\frac{3}{8}$″-1$\frac{1}{16}$″.
15 Sockets—$\frac{7}{16}$″-1$\frac{1}{8}$″.

Metric Sizes
8 Open End Spanners—8-23 mm.
6 Ring Spanners—10-22 mm.
6 Ring and Open End Spanners—10-17 mm.
8 Sockets—10-22 mm.
Spark plug Socket—14 mm./$\frac{13}{16}$ A/F.,
2 Adjustable Wrenches 6″ and 12″, 10″ Multi-grip Pliers 6″ and 10″ Extension, 9″ and 15″ Offset Handle, Tommy Bar, Reversible Ratchet, Sliding Tee Handle, Ell Handle, Speed Brace, Universal Joint.

SOCKETS, SOCKET ACCESSORIES, SOCKET SETS — 3/4″ Square Drive

L926 3/4″ SQUARE DRIVE SOCKETS

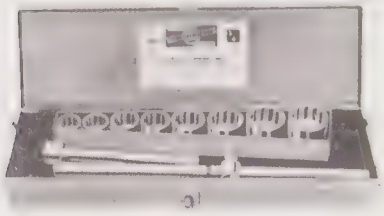
Whitworth	B.S.	A/F (S.A.E.) Across Flats	Metric
7/16″	1/2″	3/4″ 1 3/8″	33 mm
1/2″	9/16″	13/16″ 1 7/16″	35 mm
9/16″	5/8″	7/8″ 1 1/2″	36 mm
5/8″	11/16″	15/16″ 1 9/16″	38 mm
11/16″	3/4″	31/32″ 1 5/8″	
3/4″	13/16″	1″ 1 11/16″	
13/16″	7/8″	1 1/16″ 1 3/4″	
7/8″	15/16″	1 1/8″ 1 13/16″	
15/16″	1″	1 3/16″ 1 7/8″	
1″	1 1/8″	1 1/4″ 2″	
1 1/8″	1 1/4″	1 5/16″ 2 3/16″	
1 1/4″	1 3/8″		
1 3/8″	1 1/2″		



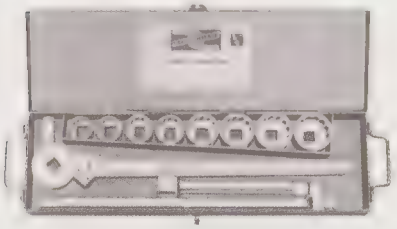
56A—21 PIECE A/F (S.A.E.) SET
13 A/F Sockets—7/16, 1/2, 1″, 1 1/16, 1 1/8, 1 1/4, 1 3/16, 1 3/8, 1 7/16, 1 1/2, 1 5/8, 1 13/16, 2″.
Bar Handle and Short "T" Adaptor, Ratchet Handle and Coupler, Swivel Handle, 8″ and 16″ Extension, Universal Joint.

55A—20 PIECE SET
12 Whit. Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1″, 1 1/8, 1 1/4.
8 Accessories as above.

57A—33 PIECE SET
12 Whit. Sockets—7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1″, 1 1/8, 1 1/4.
13 A.F. (S.A.E.) Sockets—
8 Accessories as above.

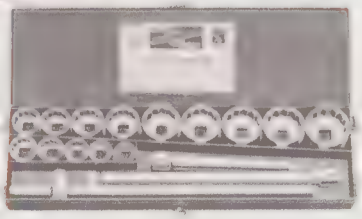


237-2—10 PIECE SET
8 A/F Sockets—1 1/16, 1 1/8, 1 1/4, 1 3/16, 1 7/16, 1 1/2, 1 11/16, 1 3/4″
Extension 9″, Sliding Tee Handle 18″.

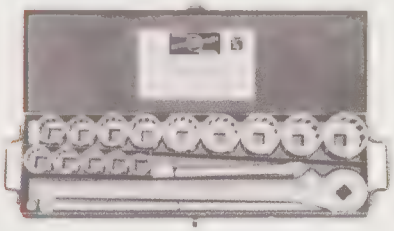


238-0—12 PIECE SET
8 A/F Sockets—1 1/16″, 1 1/8, 1 1/4, 1 3/16, 1 7/16, 1 1/2, 1 11/16, 1 3/4″.
Extension 9″, Ratchet, Female 20″, Adaptor, Double Male 1 11/16, Sliding Tee Handle 18″.

32EMZ—16 PIECE METRIC SET
10 Metric Sockets—22, 24, 27, 30, 32, 36, 38, 41, 46, 50 mm.
6 Accessories as above.



239-9—17 PIECE SET
14 A/F Sockets—1/2, 1″, 1 1/16 1 1/8, 1 3/16, 1 1/4, 1 5/16, 1 7/16, 1 1/2, 1 11/16, 1 3/4, 1 13/16, 1 7/8, 2″.
Extension 9″, Extension 15″, Sliding Tee Handle 18″.



240-1—19 PIECE SET
14 A/F Sockets—1/2, 1″, 1 1/16, 1 1/8, 1 3/16, 1 1/4, 1 5/16, 1 7/16, 1 1/2, 1 11/16 , 1 3/4, 1 13/16, 1 7/8, 2″.
Extension 9″, Extension 15″, Ratchet, Female 20″, Adaptor, Double Male 1 11/16″, Sliding Tee Handle 18″.

L927 SOCKET ACCESSORIES— 3/4″ SQUARE DRIVE

4 1/2″, 9″ and 15″ M & F Extensions

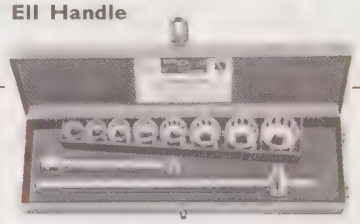
Reversible Ratchet

Swivel Handle

Sliding T Handle 18″

Adaptor
Double Male 1 11/16

Ell Handle



283-1—10 PIECE SET
8 Whit. Sockets—1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 1″, 1 1/4.
B.S. Equiv.—9/16, 5/8, 11/16, 3/4, 7/8, 1″, 1 1/8, 1 1/4.
Extension 9″, Sliding Tee Handle 18″.

COMBINATION SOCKET SET 3/4″ SQ. DRIVE A.F. AND WHITWORTH

422-0—31 PIECE SET
18 A/F Sockets—1/2, 1″, 1 1/16, 1 1/8, 1 3/16, 1 1/4, 1 5/16, 1 3/8 1 7/16, 1 1/2, 1 9/16, 1 5/8, 1 11/16, 1 3/4, 1 13/16, 1 7/8, 2″, 2 1/16.
8 Whit. Sockets—1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 1″, 1 1/4.
B.S. Equiv.—9/16, 5/8, 11/16, 3/4, 7/8, 1″, 1 1/8, 1 1/4.
Extension 9″, Extension 15″, Ratchet, Female 20″, Adaptor, Double Male 1 11/16″, Sliding Tee Handle 18″.

SOCKETS, SOCKET ACCESSORIES, SOCKET SETS — 1″ Square Drive

L928 1″ SQUARE DRIVE SOCKETS

Whitworth	B.S.	A.F. (S.A.E.)	
7/16″	1/2″	7/8″	2″
1/2″	9/16″	1″	2 1/16″
9/16″	5/8″	1 1/8″	2 1/8″
5/8″	11/16″	1 1/4″	2 3/16″
11/16″	3/4″	1 5/16″	2 1/4″
3/4″	7/8″	1 3/8″	2 3/8″
13/16″	15/16″	1 7/16″	2 1/2″
7/8″	1″	1 1/2″	2 9/16″
15/16″	1 1/16″	1 5/8″	2 5/8″
1″	1 1/8″	1 11/16″	2 3/4″
1 1/8″	1 1/8″	1 3/4″	2 13/16″
1 1/4″	1 3/8″	1 13/16″	3 1/8″
1 3/8″	1 1/2″	1 7/8″	
1 1/2″	1 5/8″		
1 5/8″	1 3/4″		
1 3/4″	2″		
1 7/8″	—		
2″	2 1/4″		

D21EW—14 PIECE SET

10 Whitworth Sockets—7/8, 1 1/8, 1″, 1 1/8, 1 1/4, 1 3/8, 1 1/2, 1 5/8, 1 3/4, 2″. Tommy Bar and Sliding Tee, 8″ and 16″ Extensions, Reversible Ratchet Handle, Square Coupler.

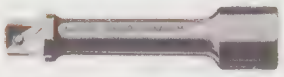
D21EA—14 PIECE SET

10 A/F Sockets—1 7/16, 1 1/8, 1 1/16, 2″, 2 3/16, 2 1/8, 2 5/16, 2 1/4, 2 1/8, 3 1/8. Tommy Bar and Sliding Tee, 8″ and 16″ Extensions, Reversible Ratchet Handle, Square Coupler.

D21EM—16 PIECE METRIC SET

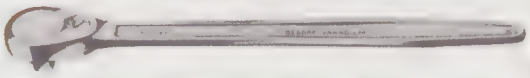
10 Metric Sockets—36, 41, 46, 50, 55, 60, 65, 70, 75, 80 mm. 6 Accessories as above.

L929 SOCKET ACCESSORIES — 1″ Square Drive

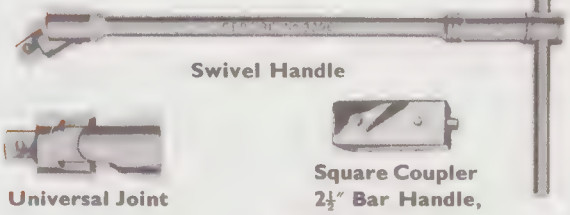


8″ and 16″ M & F Extensions

Sliding Bar Handle



Reversible Ratchet,



Swivel Handle

Universal Joint

Square Coupler 2 1/2″ Bar Handle,

Ratchet Head and Bar

L930 TUBULAR BOX SPANNERS

Long Series (7″ Long)

Whitworth		A.F. (S.A.E.)	Metric	B.A. (4″ Long)
1/8″ × 3/16″	5/8″ × 11/16″	5/16″ × 3/8″	8 mm × 9 mm	0 × 1
3/16″ × 1/4″	5/8″ × 3/4″	3/8″ × 7/16″	10 mm × 11 mm	0 × 2
1/4″ × 5/16″	13/16″ × 7/8″	7/16″ × 1/2″	12 mm × 13 mm	2 × 3
5/16″ × 3/8″	3/4″ × 7/8″	1/2″ × 9/16″	14 mm × 15 mm	2 × 4
1/4″ × 3/8″	7/8″ × 1″	9/16″ × 5/8″	16 mm × 17 mm	4 × 5
3/8″ × 7/16″	15/16″ × 1″	5/8″ × 11/16″	18 mm × 19 mm	4 × 6
7/16″ × 1/2″	1″ × 1 1/8″	11/16″ × 3/4″	20 mm × 21 mm	6 × 7
3/8″ × 1/2″	1″ × 1 1/4″	3/4″ × 7/8″	22 mm × 23 mm	6 × 8
1/2″ × 9/16″	1 1/4″ × 1 1/8″	7/8″ × 1″	24 mm × 25 mm	
7/16″ × 9/16″	1 1/4″ × 1 1/2″	15/16″ × 1″		
1/2″ × 5/8″		1″ × 1 1/8″		
9/16″ × 5/8″				
9/16″ × 11/16″				
11/16″ × 3/4″				

L931 SPARK PLUG SPANNER — No. 253

14 mm x 18 mm Plug Size

TENSION WRENCHES

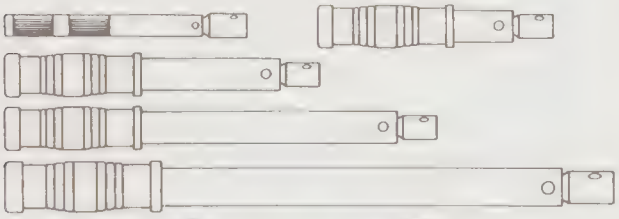
WARREN & BROWN "DUAL SIGNAL"

Wrench Number	Capacity	Square Drive	Length Overall
320300	10– 180 inch pounds	9/32″	6 15/16″
321100	4– 80 Foot pounds	3/8″	13 3/8″
321200	8– 160 Foot pounds	3/8″	13 3/8″
322000	10– 120 Foot pounds	1/2″	17 1/8″
322100	1.5– 17 metre kg.	1/2″	17 1/8″
323000	20– 200 Foot pounds	1/2″	20 5/8″
324000	50– 300 Foot pounds	3/4″	24″
324100	40– 400 Foot pounds	3/4″	38 7/8″
325000	100– 500 Foot pounds	1″	35 1/2″
326000	200–1000 Foot pounds	1″	54 3/4″
326100	300–1500 Foot pounds	1″	87 1/4″
332000	20– 160 Foot pounds	1/2″	19 3/8″

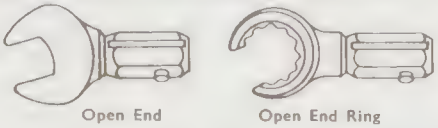
JOTRU PRE-SET TORQUE HANDLES

with interchangeable snap-in drives.

Six Torque Handles range from 1 to 150 ft. lbs.



STANDARD DRIVES

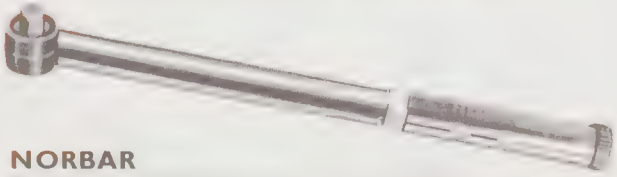


Open End — Open End Ring

Square Drive — Ratchet or Sq. Drive

NORBAR TORQUE MULTIPLIERS

5 to 1 Torque Multiplication, 9 sizes range from 750 ft. lbs. to 25,000 ft. lbs.



NORBAR SLIM-LINE TORQUE SPANNERS

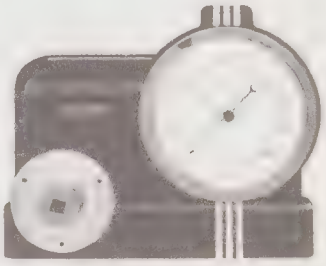
Model No.	Capacity Lb. ins.	Capacity Lb. Ft.	Capacity cm/kg.	Length Ins.	Square Drive	Weight Lb.
SL1	60-360	5-30	69-414	11	1/2″	1.8
SL2	240-1200	20-100	276-1382	16 1/2	1/2″	2.25
SL3	600-2040	50-170	691-2349	23	1/2″	2.75

NORBAR BOLT LOAD METERS

Designed to measure bolt load only, to calibrate nut runners, impact wrenches or torque spanners. 5 sizes range 1/8″ to 1 1/4″ bolt size.

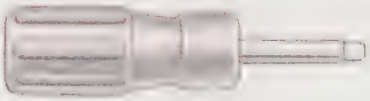
NORBAR STATIC TORQUE METERS

for Torque Spanner Testing
7 sizes from 0-35 lb. ft. to 100-4000 lb. ft.



M.H.H. TORQUE METER WRENCHES

Dial indicating wrenches
3 lbs inches to 1500 lb. ft.



M.H.H. TORQUE MASTER TORQUE LIMITING SCREWDRIVERS

1/2 oz. inches to 100 lb. inches

PLIERS

L931 INSULATED COMBINATION (Heavy Red P.V.C.)
Size: 8″

L937 FENCING
Sizes: 10″, 12″

L943 INSULATED RADIO AND ELECTRONIC
Size: 6¾″

L932 INSULATED COMBINATION (Red P.V.C.)
Size: 6″, 7″, 8″, 9″

L938 SCOTCH GAS
Sizes: 8″, 10″

L944 NEEDLE NOSE
Size: 6⅜″

L933 ENGINEERS COMBINATION
Sizes: 6″, 7″, 8″, 10″

L939 FLAT NOSE
Sizes: 4″, 5″, 6″

L945 INSULATED NEEDLE NOSE
Size: 6⅜″

L934 LINESMENS SIDE CUTTING
Size: 8″

L940 ROUND NOSE
Sizes: 4″, 5″, 6″

L946 RADIO
Sizes: 5½″, 6⅜″

L935 DIAGONAL CUTTING
Sizes: 5″, 6″, 7″

L941 SHORT CHAIN NOSE
Size: 7″

L947 INSULATED RADIO
Sizes: 5½″, 6⅜″

L936 INSULATED DIAGONAL CUTTING
Sizes: 5″, 6″, 7″

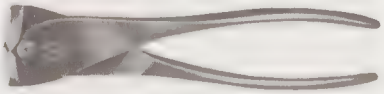
L942 RADIO AND ELECTRONIC
Size: 6¾″

L948 INSULATED BOX JOINT RADIO
Size: 5½″

PLIERS

L949 INSULATED BOX JOINT DIAGONAL CUTTING
Size: 5″

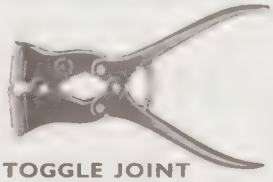
L953 INSULATED LONG CHAIN NOSE
Size: 8″



L957 TOP CUTTING
Size: 8″

L950 STOCKING
Size: $6\frac{1}{4}$″

L954 BENT LONG CHAIN NOSE
Size: $6\frac{1}{2}$″



L958 TOGGLE JOINT TOP CUTTING
Size: 7″

L951 DUCKBILL HOSIERY
Size: $7\frac{1}{2}$″

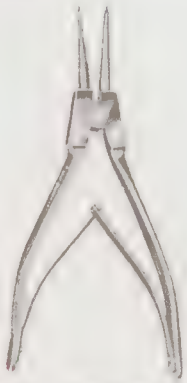
L955 END CUTTING
Size: 6″

L959 REED
Size: $6\frac{1}{2}$″

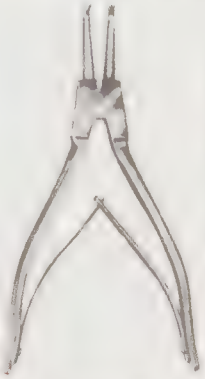
L952 LONG CHAIN NOSE
Size: 8″

L956 KNOB AND CLAW PINCERS
Size: 8″

L960 GLASS
Size: 8″



L961 EXTERNAL CIRCLIP — STRAIGHT
Sizes: $5\frac{1}{8}$″, $7\frac{1}{2}$″, $9\frac{1}{4}$″, $12\frac{1}{4}$″



L962 EXTERNAL CIRCLIP — BENT
Sizes: $5\frac{1}{8}$″, $7\frac{1}{2}$″, $9\frac{1}{4}$″, $12\frac{1}{4}$″

L963 INTERNAL CIRCLIP — STRAIGHT
Sizes: $5\frac{1}{2}$″, $7\frac{1}{4}$″, $9\frac{1}{4}$″, $12\frac{1}{4}$″

L964 INTERNAL CIRCLIP — BENT
Sizes: $5\frac{1}{2}$″, $7\frac{1}{4}$″, $9\frac{1}{4}$″, $12\frac{1}{4}$″

WIRE STRIPPERS

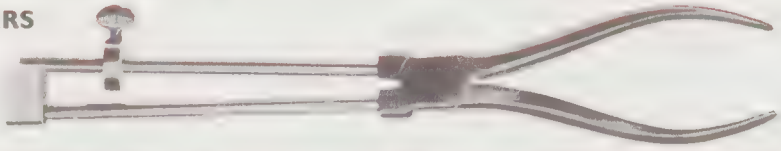
L965 WIRE STRIPPERS — INSULATED
Length Overall: 6″

L966 WIRE STRIPPER
Length Overall: 6½″

L967 WIRE STRIPPER
4 holes for dia. of inner wire 0.5 to 2 mm.

L968 WIRE STRIPPER
5 holes for dia. of inner wire 1.0 to 3.2 mm.

L969 GAUGE-GLASS CUTTERS



SELF GRIP WRENCHES

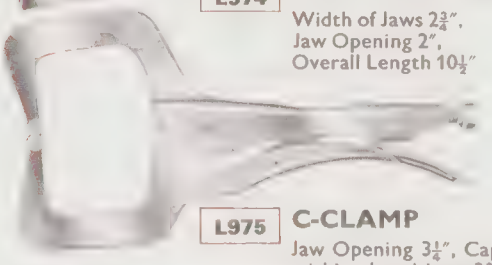
L970 STANDARD
Sizes: 7″ and 10″

L971 CURVED JAW
Sizes: 7″, 10″

L972 TUBE GRIP
Tube Sizes: ⅜″, ½″, ¾″ inside diameter

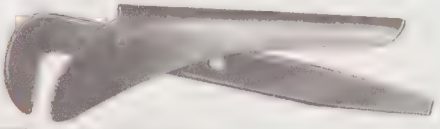
L973 SHEET METAL TOOL
Width of Jaws: 3″, Overall Length 8″

L974 WELDING CLAMP
Width of Jaws 2¾″,
Jaw Opening 2″,
Overall Length 10½″



L975 C-CLAMP
Jaw Opening 3½″, Capacity within closed jaws 3¾″,
Overall length 11″

L976 MULTIGRIP PLIERS
Chrome Vanadium
Overall Length: 4½″, 7″, 10″, 15″

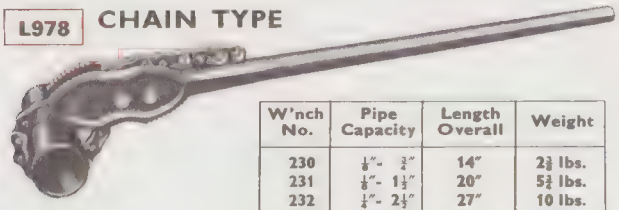


L977 "FOOTPRINT"

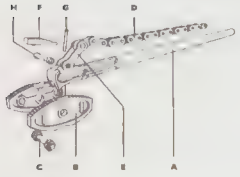
Size	9	12	14
Jaws Open	⅛″–2½″	¼″–3″	¼″–3″

PIPE WRENCHES

L978 CHAIN TYPE



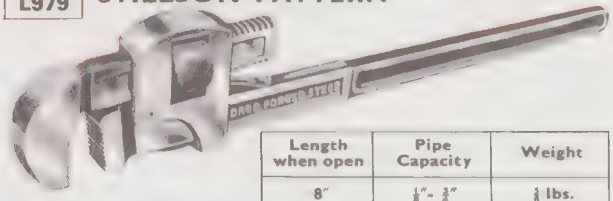
W'nch No.	Pipe Capacity	Length Overall	Weight
230	⅛"- ¾"	14"	2⅜ lbs.
231	⅛"- 1½"	20"	5½ lbs.
232	¼"- 2½"	27"	10 lbs.
233	¾"- 4"	37"	17 lbs.
233½	1" - 6"	44½"	25 lbs.
234	1½"- 8"	50½"	35 lbs.
235	2" -12"	64½"	56 lbs.
216	4" -18"	87"	147 lbs.



A Handle
B Jaws
C Jaw Bolts and Nuts (532-535 only)
Studs and Nuts (230-235 only)
D Chain and Connecting Link
E Stirrup Link (532-535 only)
F Centre Jaw (532-535 only)
G Centre Jaw Rivet (532-535 only)
H Stirrup Link Pin and Washer (532-535 only)

Spare Jaws and Chains are available.

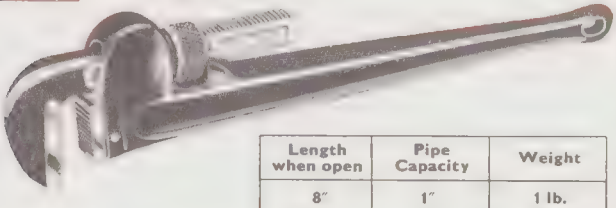
L979 STILLSON PATTERN



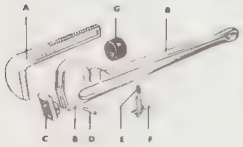
Length when open	Pipe Capacity	Weight
8"	⅛"- ¾"	⅛ lbs.
10"	⅛"-1"	1⅜ lbs.
12"	¼"-1¼"	2 lbs.
14"	¼"-1½"	2¾ lbs.
18"	¼"-2"	4¼ lbs.
24"	¼"-2½"	7½ lbs.
36"	¼"-3½"	15½ lbs.
48"	1"-5"	23 lbs.

A Hook Jaw
B Handle
C Frame
D Frame Pin
E Spring and Rivet (front)
F Spring and Rivet (rear) Not fitted to sizes 8", 36" and 48"
G Nut

L980 LEADER PATTERN



Length when open	Pipe Capacity	Weight
8"	1"	1 lb.
10"	1½"	2 lbs.
14"	2"	4 lbs.
18"	2½"	6 lbs.
24"	3"	10 lbs.
36"	5"	20 lbs.
48"	6"	36 lbs.
60"	8"	47 lbs.

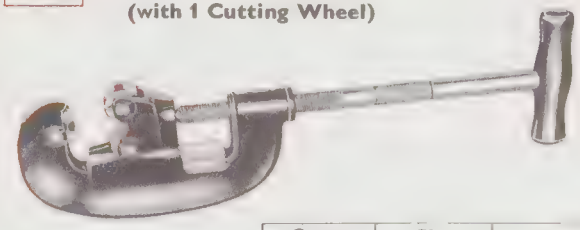


A Hook Jaw
B Handle
C Handle Jaw
D Handle Jaw Pin
E Coil Spring
F Flat Spring
G Nut

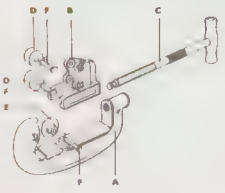
Spare Jaws and parts available.

PIPE CUTTERS

L981 ROLLER PATTERN (with 1 Cutting Wheel)



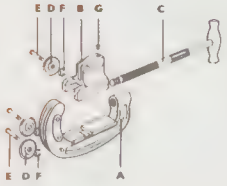
Cutter Number	Pipe Capacity	Weight
202	⅛"-2"	7 lbs.
203	1"-3"	15 lbs.
204	2"-4"	18½ lbs.



A Pipe Cutter Body
B Slide
C Main Screw and Handle
D Roller
E Fast Cutting Wheel
F Pins and Circlips

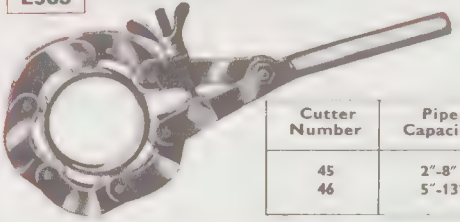
L982 THREE WHEEL PATTERN

Cutter Number	Pipe Capacity	Weight
103	1½"-3"	8½ lbs.

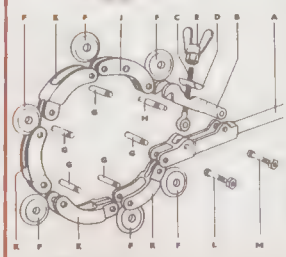


A Pipe Cutter Body
B Slide
C Main Screw and Handle
D Fast Cutting Wheels
E Pins
F Circlips
G Grubscrew

L983 LINK PATTERN



Cutter Number	Pipe Capacity	No. of Wheels
45	2"-8"	10
46	5"-13"	10



A Handle
B Fork
C Eyebolt
D Half-round Washer
E Wing Nut (Plain Nut on Nos. 46 and 47)
F Cutting Wheel
G Wheel Pin
H End Pin
J Connecting Link
K Shouldered Link
L Bolt and Nut for Eyebolt
M Bolt and Nut for Fork

BOLT CUTTERS

L985 CENTRE CUT JAWS FOR GENERAL CUTTING

Tool Number	To Cut Bolts on Thread Diameter	Normal Capacity		Length	Weight
		Medium Hard	Soft Steel		
910	1/4"	3/16"	1/4"	10"	1¾ lbs.
914	5/16"	1/4"	5/16"	14"	2½ lbs.
918	3/8"	5/16"	3/8"	18"	4 lbs.
924	7/16"	3/8"	7/16"	24"	6½ lbs.
930	9/16"	1/2"	9/16"	30"	10½ lbs.
936	5/8"	9/16"	5/8"	36"	14¼ lbs.
942	3/4"	5/8"	3/4"	42"	21½ lbs.

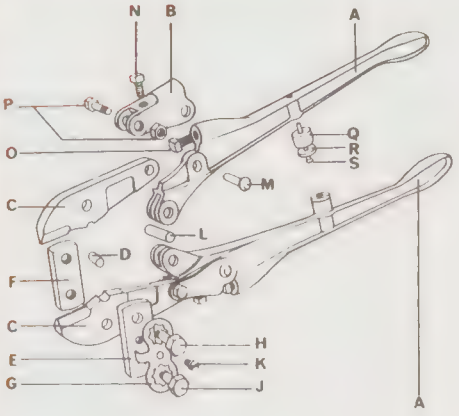
L986 CENTRE CUT JAWS FOR HIGH TENSILE WIRE AND CHAIN

Tool Number	To cut High Tensile Rods		To cut Chain Links	Length	Weight
	High Tensile	Medium Tensile			
910H	1/8"	3/16"	1/8"	10"	1¾ lbs.
914H	3/16"	1/4"	3/16"	14"	2½ lbs.
918H	1/4"	5/16"	1/4"	18"	4 lbs.
924H	5/16"	3/8"	5/16"	24"	6½ lbs.
930H	3/8"	7/16"	3/8"	30"	10½ lbs.
936H	7/16"	1/2"	7/16"	36"	14¼ lbs.
942H	1/2"	9/16"	1/2"	42"	21½ lbs.

L987 CLIPPER CUT JAW FOR CLOSE CUTTING

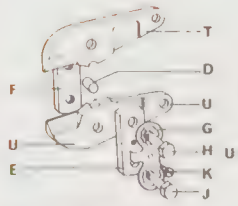
Tool Number	To Cut Bolts on Thread Diameter	Normal Cutting Steel Rods	Length	Weight
910F	1/4"	3/16"	10"	1¾ lbs.
914F	5/16"	1/4"	14"	2½ lbs.
918F	3/8"	5/16"	18"	4 lbs.
924F	7/16"	3/8"	24"	6½ lbs.
930F	9/16"	1/2"	30"	10½ lbs.
936F	5/8"	9/16"	36"	14¼ lbs.
942F	3/4"	5/8"	42"	21½ lbs.

COMPONENT PARTS

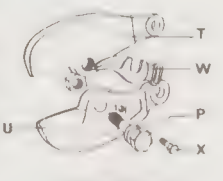


A Handle
B Adjusting Arm
C Jaw
D Jaw Centre Roller
E Top Strap
F Bottom Strap
G Locking Plate
H Strap Bolt (left hand thread)
J Strap Bolt (right hand thread)
K Locking Plate Screw
L Handle Connecting Rivet
M Adjusting Arm Rivet
N Arm Adjusting Screw
O Handle Adjusting Screw
P Connecting Bolt and Nut
Q Buffer
R Buffer Washer
S Buffer Rivet

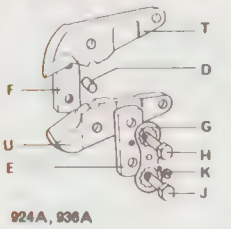
PARTS FOR ALTERNATIVE CUTTER HEADS



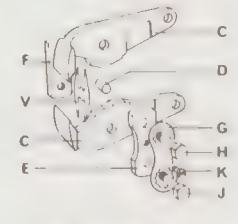
910F, 914F, 918F, 924F, 930F, 936F, 942F



914S, 924S, 936S



924A, 936A



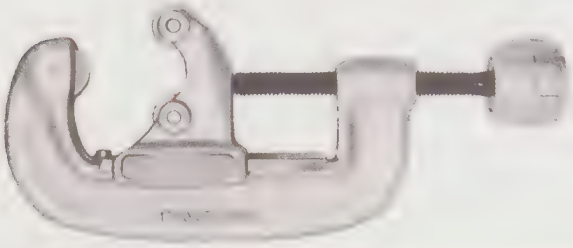
914E, 924E, 936E

T Jaw—Right Hand, A, F and S
U Jaw—Left Hand, A, F and S
D Jaw Centre Roller
E Top Strap
F Bottom Strap
G Locking Plate
H Strap Bolt (left hand thread)
J Strap Bolt (right hand thread)
K Locking Plate Screw
V Spring (End Cutter only)
P Jaw Connecting Bolt and Nut (Shear Cutter only)
W Finger (Shear Cutter only)
X Finger Bolt (Shear Cutter only)

Spare Parts available.

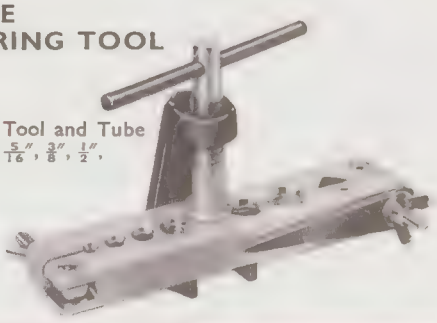
TUBE CUTTERS AND FLARING TOOLS

L988 **TUBE CUTTERS** — $\frac{1}{8}$"-1" With Rollers
3 Wheel Cutter. Up to $1\frac{1}{2}$" diameter



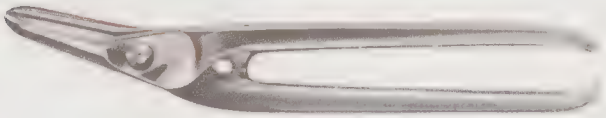
L989 **TUBE FLARING TOOL**

Combined Flaring Tool and Tube Cutter for $\frac{3}{16}$", $\frac{1}{4}$", $\frac{5}{16}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$" O.D. Tube



HANDSHEARS UNIVERSAL PATTERN

L990 **CRANKED** — Right Hand 11", 14"
Left Hand 11"



L991 **STRAIGHT** — Right Hand 12"

L992 **HEAVY DUTY SHEAR** — 14"

L993 **"WISS" METAL MASTER**

Length Overall $9\frac{3}{4}$" Blade Length $1\frac{3}{8}$"
Cutting Capacity 18 S.W.G.

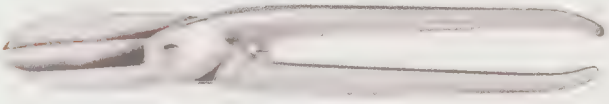
RIGHT HAND	LEFT HAND
M1 Without Grips	M2 Without Grips
M1R With Red Grips	M2R With Red Grips

STRAIGHT CUT OR CURVED

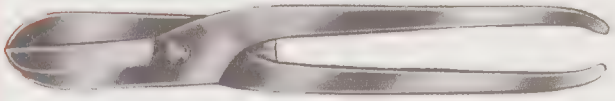
M3 Without Grips
M3R With Yellow Grips

TINSNIPS

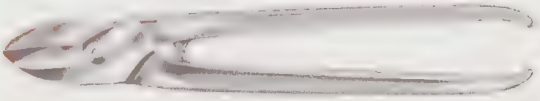
L994 **STRAIGHT BLADE** — 8", 10", 12", 14"



L995 **CURVED BLADE** — 8", 10", 12", 14"



L996 **SHORT BLADE** — 8"



L997 **JEWELLERS SHEARS** —
7" Straight Blade, Bent Blade

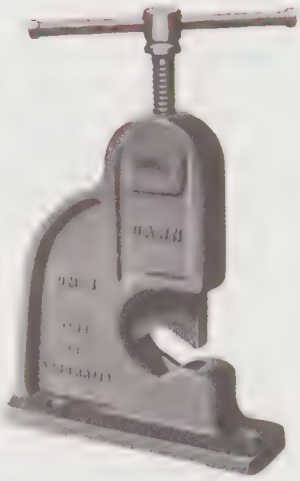
L998 **AMERICAN PATTERN**
10", 12"

PIPE VICES

L1000 CHAIN TYPE

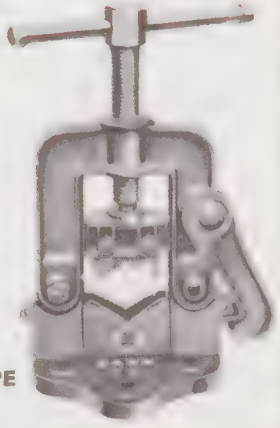
Vice Number	B.S. Pipe Capacity	Weight
181	⅛″-2″	4 lbs.
182	¼″-4″	11 lbs.
183	½″-6″	19 lbs.
184	½″-8″	27 lbs.

L1003 OPEN MOUTH TYPE



Vice Number	B.S. Pipe Capacity	Weight
9111	1¼″	18 lbs.
9112	2″	38 lbs.
9113	3″	50 lbs.
9114	4″	89 lbs.

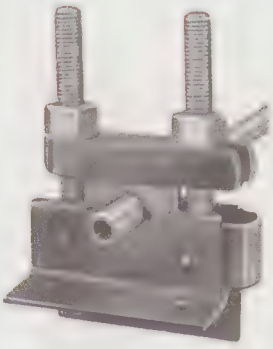
L1001 HINGED TYPE



Vice Number	B.S. Pipe Capacity	Weight
91	⅛″-1″	3 lbs.
91½	⅛″-1½″	5½ lbs.
92	⅛″-2″	8 lbs.
92½	⅛″-2½″	11 lbs.
93½	⅛″-3½″	18 lbs.
94½	⅛″-4½″	25 lbs.
96	⅛″-6″	40 lbs.
98	1″-8″	95 lbs.

Also available LONG JAW TYPE

L1004 POST TYPE



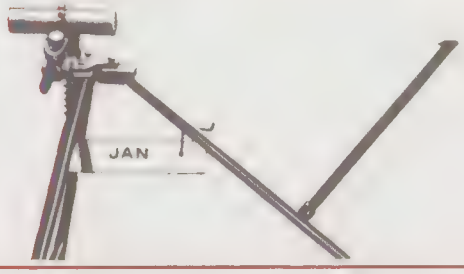
Vice Number	B.S. Pipe Capacity
9091	1½″
9092	2″
9093	3″

L1002 LEVER ACTION

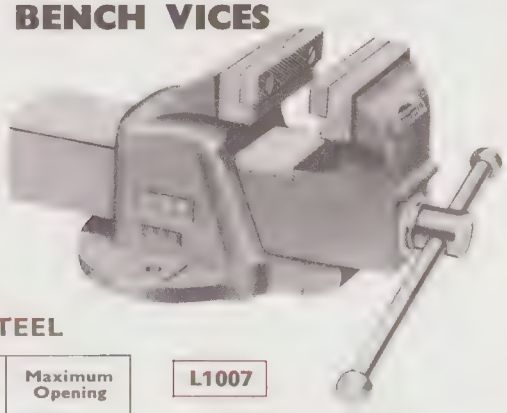
Standard ¼″ to 2″
Heavy Duty ¼″ to 4″

L1005 PIPE VICE STAND

for hinged, chain or Open Mouth Vices.
Tripod Stand — folds into compact portable unit.
Weight 35 lbs.



CAST BENCH VICES



L1006

SEMI STEEL

Size Width of Jaw	Maximum Opening
2¼″	2½″
2½″	2¾″
3″	3⅜″
3½″	4⅛″
4″	5½″
4½″	5⅝″
5″	6⅝″
6″	7½″

L1007

ALL STEEL PLAIN

SIZE Jaw Opening	Maximum Opening
4″	5½″
4½″	5⅝″
5″	6⅝″
6″	7½″

L1008

SWIVEL BASE

For Semi Steel Vices
To Suit 3″, 3½″, 4″, 4½″, 5″, 6″

L1009

QUICK ACTION

Semi Steel and All Steel

Size Width of Jaw	Maximum Opening
3¼″	4⅜″
4¼″	6⅞″
5¼″	7¼″
6″	8″

L1010

FULL OFFSET SEMI-STEEL

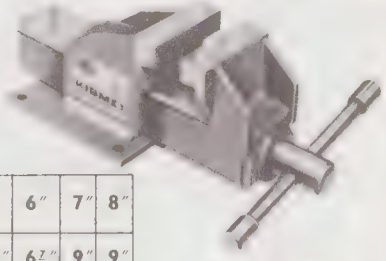
Size Width of Jaw	Maximum Opening
3″	3¼″
3½″	4¼″
4″	5½″
4½″	6″
5″	6½″
6″	7½″

L1011

FULL OFFSET ALL STEEL

Size Width of Jaw	Maximum Opening
4″	6¼″
4½″	6¼″
5″	6¼″
6″	7″

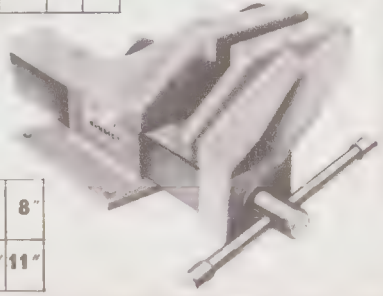
FABRICATED STEEL BENCH VICES



L1012

PLAIN

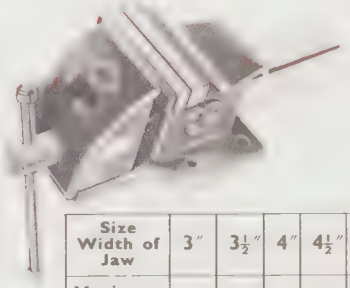
Size Width of Jaw	3″	4″	5″	6″	7″	8″
Maximum Opening	2⅞″	4¼″	5½″	6⅞″	9″	9″



L1014

FULL OFFSET

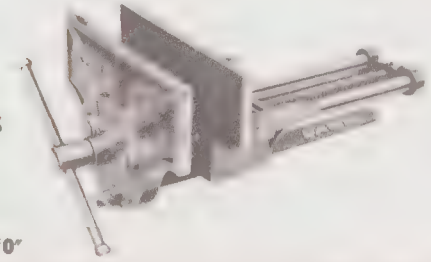
Size Width of Jaw	4″	5″	6″	8″
Maximum Opening	4¼″	5½″	6⅞″	11″



L1014

JOPLIN PLAIN

Size Width of Jaw	3″	3½″	4″	4½″	5″	6″
Maximum Opening	4½″	5½″	6″	6″	7″	8½″



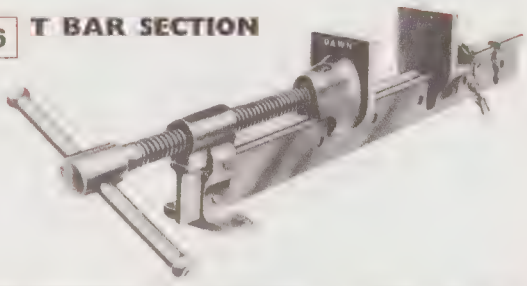
L1015

WOOD-WORKERS VICES

Plain or Quick Acting
Size
6″, 7″, 8″, 9″, 10″

CRAMPS AND CLAMPS

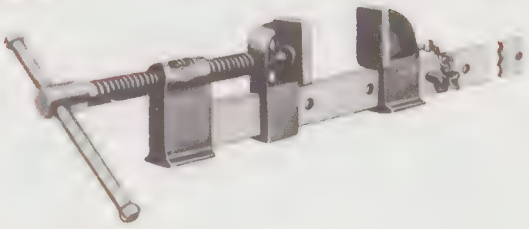
L1016 T BAR SECTION



Size	24″	30″	36″	48″	54″	60″	72″	78″	84″	96″
Max. Opening	18″	24″	30″	42″	48″	54″	66″	72″	78″	90″

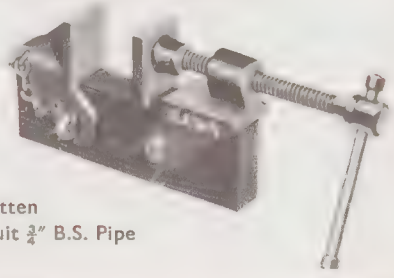
Available Light Pattern and Heavy Pattern.

L1017 FLAT BAR SECTION



Light Pattern $1\frac{1}{4}$″ x $\frac{1}{4}$″
Heavy Pattern $1\frac{1}{2}$ x $\frac{5}{16}$″
Sizes 24″, 30″, 36″, 48″, 54″, 60″

L1018 CRAMP HEAD FITTINGS



Designed for Mounting on 1″ thick hardwood Batten
Also available to suit $\frac{3}{4}$″ B.S. Pipe

L1019 MALLEABLE "G" CLAMPS

Size (Maximum Opening)							
$2\frac{1}{2}$″	3″	4″	5″	6″	8″	10″	12″

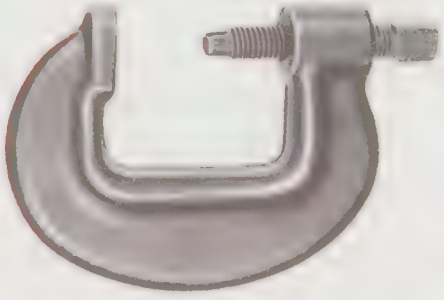
L1020 QUICK ACTION CLAMPS

Size Maximum Opening
6″
8″
9″
12″
15″
18″
20″
24″
36″

L1021 E.M. ATTACHMENT

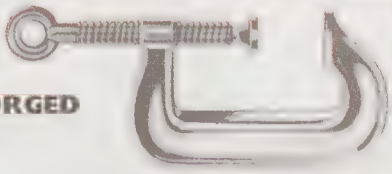
For use when pressure at right angle to clamping is required.

L1022 EXTRA HEAVY DUTY FORGED STEEL CLAMPS



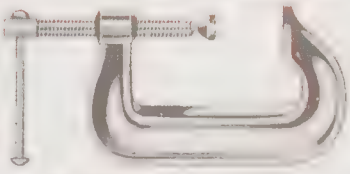
Size Maximum Opening
$4\frac{1}{2}$″
$6\frac{1}{2}$″
$8\frac{1}{2}$″
$10\frac{1}{2}$″
12″

DROP FORGED CLAMPS



L1023 EYE TYPE
3″, 4″, 6″, 8″

L1024 WING TYPE
2″, 3″, 4″, 6″, 8″, 10″, 12″



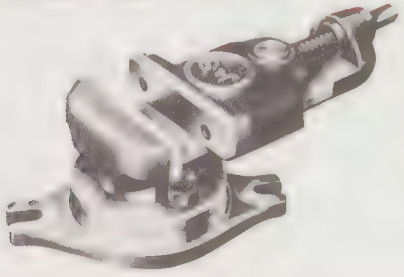
L1025 BAR TYPE
3″, 4″, 6″, 8″

MACHINE VICES

MILLING MACHINE VICES

Width of Jaw	Depth of Jaw	Admits Work	PLAIN VICE No.	PLAIN VICE Approx. Weight	SWIVEL VICE No.	SWIVEL VICE Approx. Weight
3″	1½″	1⅞″	223	15 lbs.	223S	24 lbs.
4″	1½″	2¾″	209	26 lbs.	209S	34 lbs.
4½″	1½″	3″	229	34 lbs.	229S	54 lbs.
6″	2″	5″	230	67 lbs.	230S	94 lbs.
6″	2″	6½″	283	76 lbs.	283S	104 lbs.
8″	2¼″	8″	261	122 lbs.	261S	197 lbs.

SWIVEL VICE MODEL 435



Width of Jaws	4″
Depth of Jaws	1″
Admits Work	2 9/16″
Height	3½″
Weight	12 lbs.

UNIVERSAL VICE MODEL 422

with Detachable Swivel Base

Width of Jaws	4″
Depth of Jaws	1″
Maximum Capacity of Jaws	2 9/16″
Height Overall	6¼″
Net Weight	25 lbs.

L1026 WALDOWN 3″ MACHINE VICE

CAST MEEHANITE BODY

Machined Top, Sides and Base.

Depth of Jaws	1½″
Height Overall	3″
Maximum Opening	3⅛″
Length of Base	9¼″

Features: Holding Down Slots, Clamp and Bolts, Acme Thread Screw, Removable V Block Jaw.

VICES FOR PLANING, SHAPING, MILLING AND DRILLING MACHINES

Width of Jaw	Depth of Jaw	Length Overall	Width Overall	Admits Work	Approx. Weight
MODEL No. 4651					
4″	1¼″	11½″	8″	4¾″	28 lbs.
5″	1¼″	13″	9″	5¼″	39 lbs.
6″	1½″	15¼″	10¼″	6¾″	56 lbs.
MODEL No. 4652					
3″	1 5/8″	14⅛″	7½″	7½″	24 lbs.
4″	1⅛″	17″	8½″	9¼″	36 lbs.
5″	1 7/8″	23″	10¼″	11½″	63 lbs.
6″	2″	25½″	11⅝″	12½″	96 lbs.
MODEL No. 4653					
4″	2¼″	18¼″	8¾″	9½″	46 lbs.
6″	3″	21″	11¼″	7¾″	125 lbs.
8″	3½″	26¼″	13¾″	10½″	195 lbs.

ADJUSTABLE ANGLE VICE

MODEL P250A

Width of Jaws	2½″
Depth of Jaws	1½″
Maximum Capacity of Jaws	2½″
Length Overall	9″
Weight	10 lbs.

SEMI-STEEL MACHINE VICE

Machined Slide Faces and Base Hardened Steel Jaws.

3 Sizes Width of Jaws 3¼″, 4″, 5″

ENGINEERS' FILES

L1027
HAND FILES

Parallel sides, taper in thickness only. One edge uncut. Lengths 4″, 6″, 8″, 10″, 12″, 14″, 16″ Bastard, Second Cut and Smooth. 18″ Bastard Cut and 6″, 8″, 10″, 12″ Dead Smooth.

L1028
FLAT FILES

Lengths 4″, 6″, 8″, 10″, 12″, 14″, 16″ Bastard, Second Cut and Smooth.
18″ Bastard Cut and 6″, 8″, 10″ 12″ Dead Smooth.

L1029
HALF ROUND FILES

Lengths 4″, 6″, 8″, 10″, 12″, 14″, 16″ Bastard, Second Cut and Smooth. 18″ Bastard Cut.

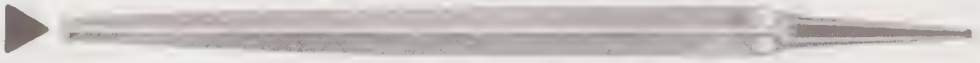
L1030
ROUND FILES

Lengths 4″, 5″, 6″, 8″, 10″, 12″, 14″, 16″ Bastard, Second Cut and Smooth. 18″ Bastard Cut.

L1031
SQUARE FILES

Square in section. Lengths 4″, 5″, 6″, 8″, 10″, 12″, 14″, 16″ Bastard, Second Cut and Smooth.
18″ Bastard Cut.

L1032
THREE SQUARE FILES



Triangular section. Double Cut. Lengths 4″, 5″, 6″, 8″, 10″, 12″ Bastard, Second Cut and Smooth. 14″ and 16″ Bastard Cut only. Triangular Taper — Regular 4″—10″, Slim 4″—10″, Extra Slim 4″—8″.

L1033
WARDING FILES

Lengths 4″, 5″, 6″, 8″ Bastard, Second Cut and Smooth.

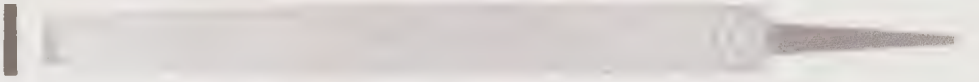
L1034
LONG ANGLE LATHE FILES

Lengths 12″, 14″.

L1035
BANDSAW FILES

Regular Taper, in 6″ and 8″; No. "67" (6″), for hand or machine filing of wood bandsaw; 8″ Bandsaw Blunt in Slim and Regular, WITHOUT TANG for machine filing.

L1036
MILLSAW FILES



Available in Two Square Edge (2SE) in lengths of 6″, 8″, 10″, 12″ and 14″ in Bastard, Second Cut and Smooth. One Round Edge (1RE) in 6″, 8″, 10″ and 12″ in Bastard and Second Cut. 14″ in Bastard Cut only. Two Round Edges (CRE) in 6″, 8″, 10″ and 12″ in Bastard and Second Cut.

L1037
CANTSAW FILES

Lengths 6″, 8″ and 10″.

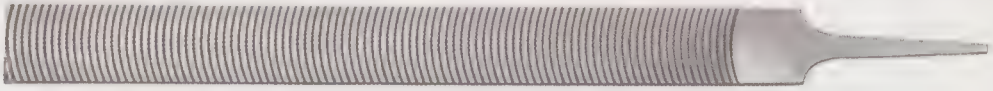
ENGINEERS' FILES

L1038
RETHREADING FILES

File No.	Thread Form	Threads Per Inch
156	Whitworth	11, 12, 14, 16, 18, 20, 22, 26
156A	U.N.F., U.N.C.	12, 13, 14, 16, 18, 20, 24, 28
156M	Metric	.75, 1.0, 1.25, 1.5, 1.75, 2.0, 2.5, 3.0
156S	B.S.P.	11, 12, 14, 16, 19, 20, 22, 28

L1039
CONTACT POINT FILE 5¼″

L1040
DREADNOUGHT FILES

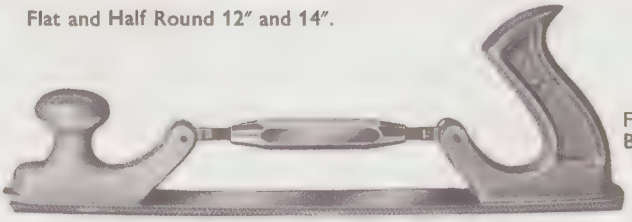


Flat and Half Round 12″, 14″, 16″.

L1041
MILLENICUT FILES

Flat and Half Round 12″ and 14″.

L1042
FLEXIBLE BODY FILE



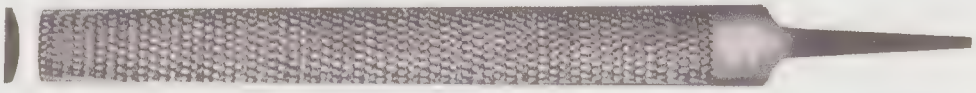
Flexible Double Sided Blade 14″ Long.

RASPS

L1043
HALF-ROUND BASTARD WOOD RASPS

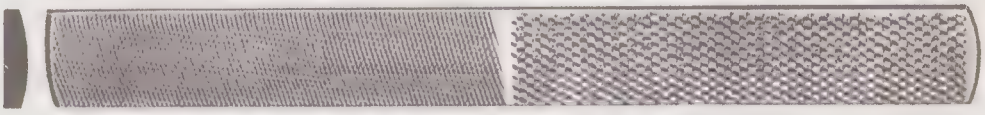
Lengths 6″, 8″, 10″, 12″ and 14″.

L1044
HALF-ROUND CABINET RASPS



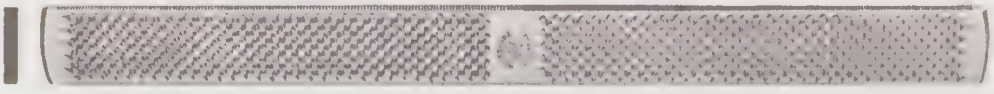
Regular and Smooth Cut. Lengths 8″, 10″, 12″ and 14″.

L1045
HALF-ROUND SHOE RASPS



Half of each surface is file cut, the other half having rasp teeth. Lengths 8″ and 10″ inches.

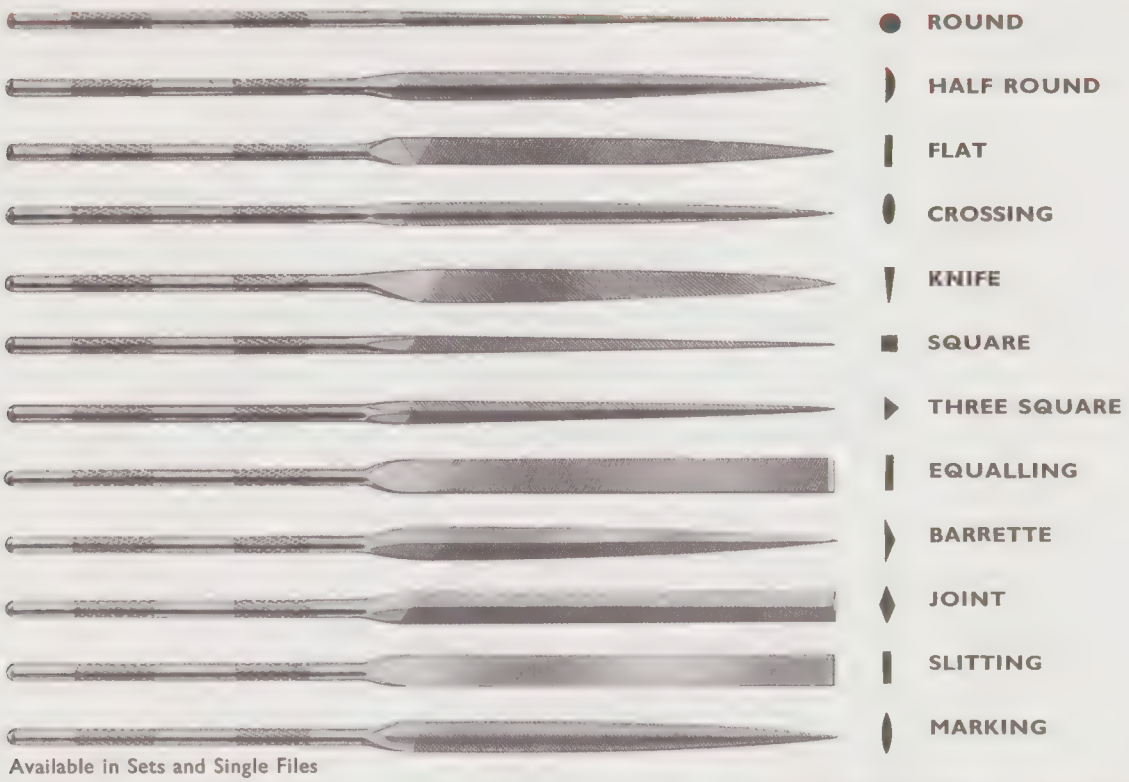
L1046
SLIM HALF FILE HORSE RASP



L1047
REGULAR HALF FILE HORSE RASP

Plain (without tang) Half File. File teeth cut on one whole side, rasp teeth punched on the other side. Sizes 14″ Regular section and 16″, 18″ Slim.

L1048 BEDFORD NEEDLE FILES

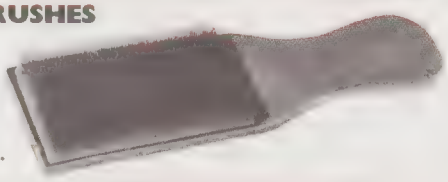


Available in Sets and Single Files

L1049 FILE HANDLES

Sizes 3″, 4″, 5″, 6″

L1050 FILE CLEANING BRUSHES



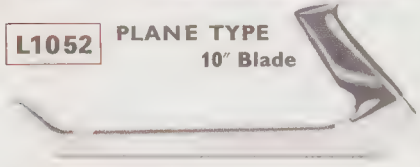
Standard Size 8½″ Overall

For keeping files in good condition. File cleaning card 2″ wide can also be supplied in any lengths.

SURFORM TOOLS

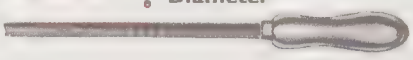
L1051 FILE TYPE
10″ Blade

L1052 PLANE TYPE
10″ Blade



L1053 BLOCK PLANE TYPE
5½″ Blade

L1054 ROUND FILE TYPE
⅝″ Diameter



REPLACEMENT BLADES

10″ Flat
Standard Cut or Fine Cut

10″ Half Round
Standard Cut

5½″ Flat
Fine Cut

10″ Round

L1055 ROD SAW

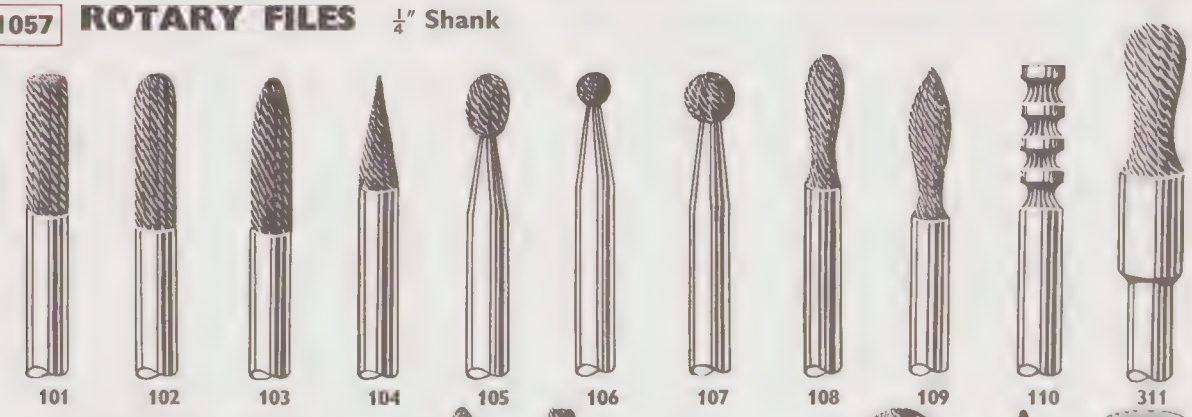
Remington Tungsten Carbide. Length 12″ fits Standard Hacksaw for Cutting Glass, Glazed Tiles, Alloy Steel and Carbon Phenolics.

L1056 TENSION FILE

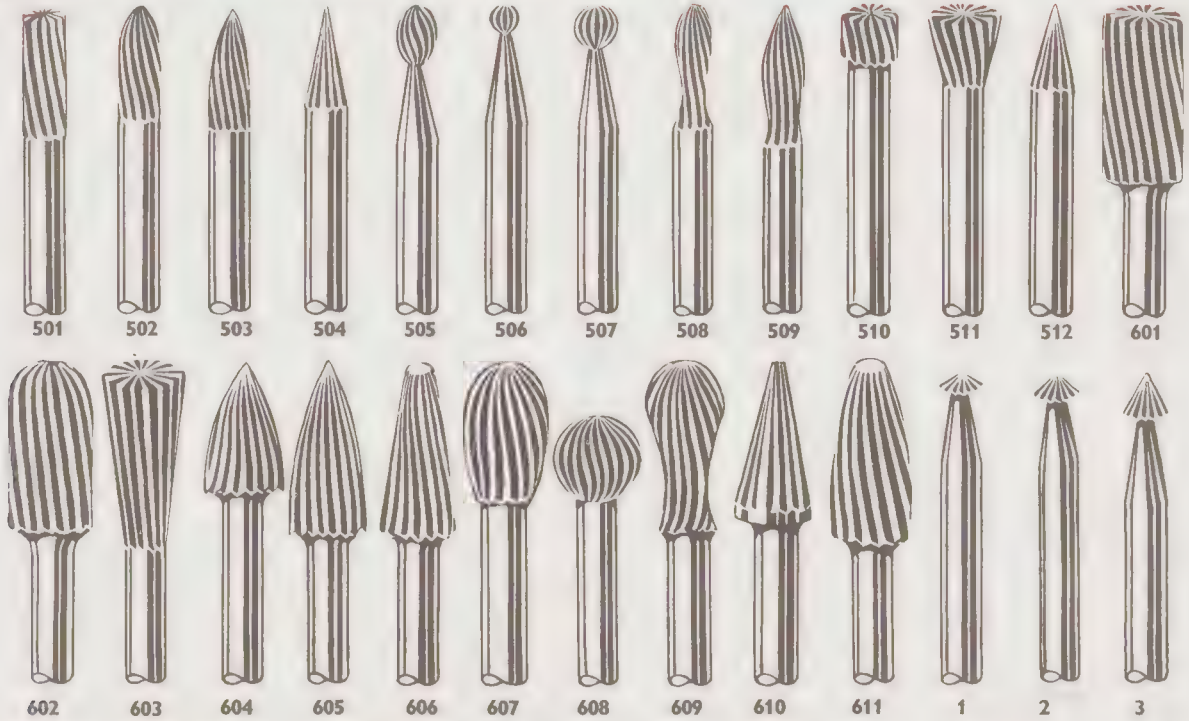
ABRAFILE 8″

Grades
Coarse, Medium, Fine

L1057 ROTARY FILES ¼" Shank

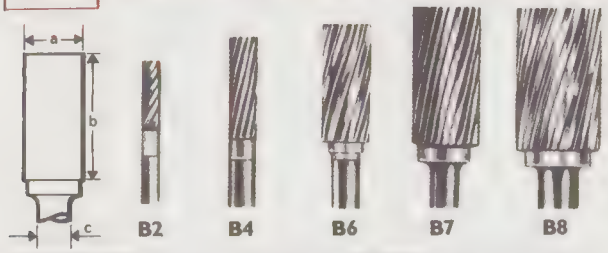


L1058 ROTARY BURRS ¼" Shank



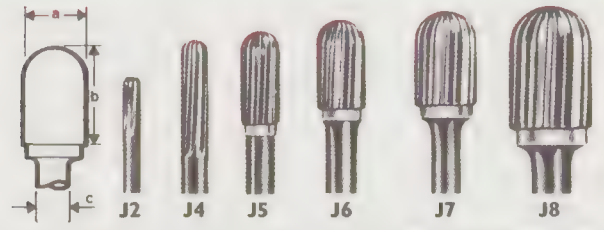
L1059 TUNGSTEN CARBIDE BURRS

Available in 3 Cuts — STANDARD, CHIPBREAKER AND DIAMOND

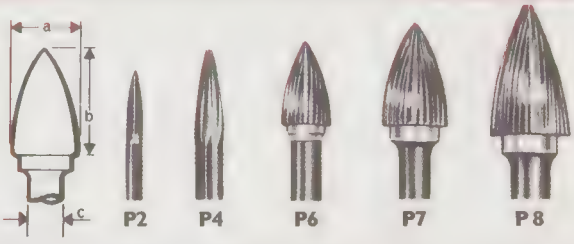


Tool Number	B2	B4	B6	B7	B8
Diameter A	0.125″	0.250″	0.375″	0.500″	0.625″
Length B	0.625″	0.750″	0.875″	1.000″	1.000″
Shank Dia. C	0.125″	0.250″	0.250″	0.250″	0.315″

Tool Number	E2	E4	E6	E7	E8
Diameter A	0.125″	0.250″	0.375″	0.500″	0.625″
Length B	0.312″	0.500″	0.625″	0.750″	0.500″
Incl. Angle E	16°	30°	35°	40°	90°
Shank Dia. C	0.125″	0.250″	0.250″	0.250″	0.250″

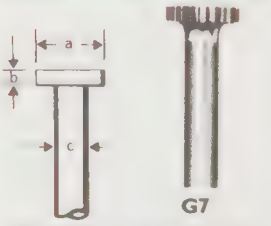


Tool No.	J2	J4	J5	J6	J7	J8
Diameter A	0.125″	0.250″	0.312″	0.375″	0.500″	0.625″
Length B	0.500″	0.750″	0.750″	0.750″	0.750″	1.000″
Shank Dia. C	0.125″	0.250″	0.250″	0.250″	0.250″	0.315″

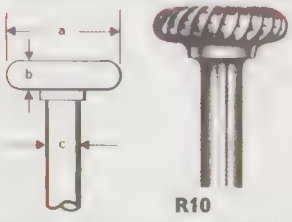


Tool Number	P2	P4	P6	P7	P8
Diameter A	0.125″	0.250″	0.375″	0.500″	0.625″
Length B	0.500″	0.750″	0.625″	0.750″	1.000″
Shank Dia. C	0.125″	0.250″	0.250″	0.250″	0.315″

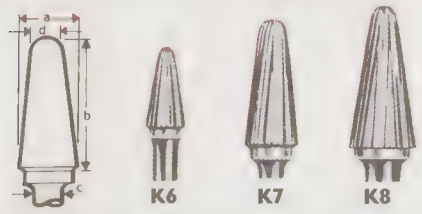
Tool No.	S2	S3	S4	S6	S7	S8
Diameter A	0.125″	0.187″	0.250″	0.375″	0.500″	0.625″
Length B	0.100″	0.160″	0.218″	0.343″	0.460″	0.550″
Shank Dia. C	0.125″	0.125″	0.250″	0.250″	0.250″	0.250″



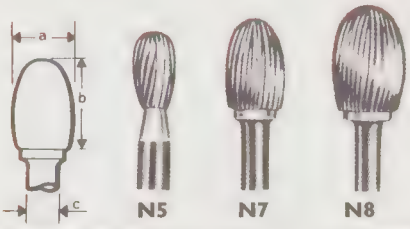
Tool Number	G7
Diameter A	0.500″
Thickness B	0.100″
Shank Dia. C	0.236″



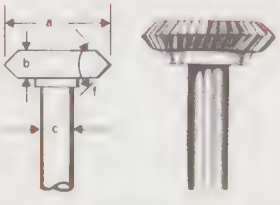
Tool Number	R10
Diameter A	1.000″
Thickness	0.250″
Shank Dia.	0.315″



Tool Number	K6	K7	K8
Large Dia. A	0.375″	0.500″	0.625″
Small Dia. D	0.156″	0.250″	0.250″
Length B	0.750″	1.187″	1.312″
Shank Dia. C	0.250″	0.250″	0.315″



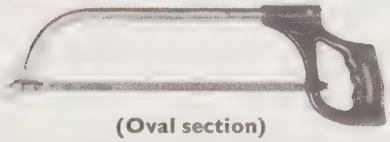
Tool Number	N5	N7	N8
Diameter A	0.312″	0.500″	0.625″
Length B	0.625″	0.750″	0.875″
Shank Dia. C	0.250″	0.250″	0.250″



Tool Number	H10
Diameter A	1.000″
Thickness B	0.200″
Shank Dia. C	0.315″
Incl. Angle F	90°

HACKSAW FRAMES

L1060 TUBULAR FRAME



(Oval section)
adjustable to take 10″ and 12″ blades.

L1061 T101 FLAT FRAME

Pistol Grip
adjustable to take 10″ and 12″ blades.
Depth of Bow 3⅜″

L1062 T100 TUBULAR FRAME

(Oval section)
adjustable to take 10″ and 12″ blades.
Depth of Bow 3⅜″

L1063 JUNIOR TENSION FRAME

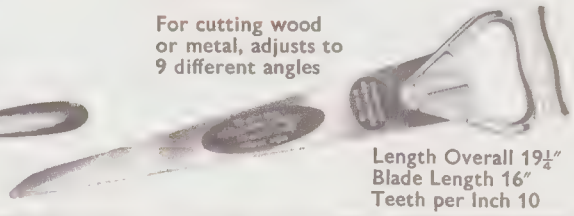
Junior Tension frame
to take 6″ blades. Depth of Bow 2″.

L1064 No. 7CP COPING SAW

Blade Length 6½″
Depth of Bow 4¾″

L1065 GENERAL PURPOSE SAW No. 66

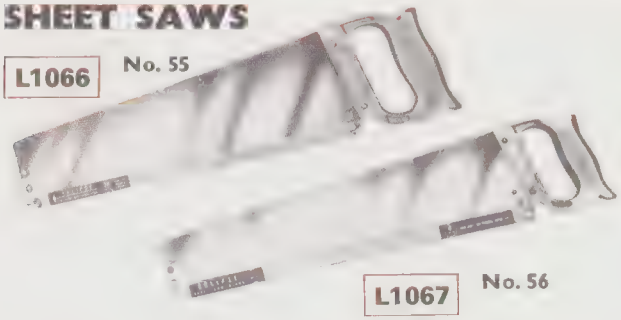
For cutting wood
or metal, adjusts to
9 different angles



Length Overall 19¼″
Blade Length 16″
Teeth per Inch 10

SHEET SAWS

L1066 No. 55



L1067 No. 56

Saw Number	Application	Overall Length
55	For cutting metal. Uses Standard 12″ Blade	16¼″
56	For cutting building materials. Uses Special 16″ Blade 6, 10 or 14 Teeth.	20½″

SPARE BLADES

Blade Number	Recommended Use	Teeth per Inch
56-6	For soft material over ½″	6
56-10	For hard material over ½″ For all material ⅜″ to ½″	10
56-14	For all material 3/16″ to ⅜″	14

HACKSAW BLADES

HIGH SPEED STEEL

	Length	Width	Thickness	Teeth per Inch
L1068 HAND	10″ 12″	½″ ½″	.025″ .025″	18, 24, 32 14, 18, 24, 32
L1069 POWER	12″	1″	.050″	10, 14
	14″	1″	.050″	10, 14
	14″	1¼″	.062″	6, 10
	16″	1¼″	.062″	6, 10
	17″	1″	.050″	10, 14
	17″	1¼″	.062″	4, 6, 10
	18″	1¼″	.062″	6, 10
	18″	1½″	.075″	4, 6
	18″	1½″	.088″	4, 6
	19″	1¼″	.088″	6
	21″	1½″	.075″	6, 10
	21″	1½″	.088″	4, 6
	24″	1¼″	.088″	4, 6
	24″	2″	.100″	4, 6

L1070 CARBON STEEL HAND

Length	Width	Thickness	Teeth per inch
10″	½″	.025″	18, 24, 32
12″	½″	.025″	14, 18, 24, 32
Double Edge			
12″	1″	.032″	24, 32

L1071 METAL CUTTING BAND SAW BLADE

Standard Length 100 feet. Cut to suit your needs. Supplied in "Made-up Bands" — if required.

Width	Teeth per inch						
⅛″					18	24	32
3/16″			10	14	18	24	32
¼″			10	14	18	24	32
⅜″		8	10	14	18	24	
½″	6	8	10	14	18	24	
⅝″	6	8	10	14	18	24	
¾″	6	8	10	14			
1″	6	8	10	14			

SPECIAL PRODUCTS DIVISION

8.32

SCREWDRIVERS

STANDARD
Clear Amber Plastic Handle

Cat. No.	Blade Length	Blade Diam.
T117	3″	5/32″
T117	4″	5/32″
T117	6″	5/32″
T125	4″	3/16″
T125	6″	3/16″
T125	8″	3/16″
T131	4″	1/4″
T131	6″	1/4″
T131	8″	1/4″
T131	10″	1/4″
T132	4″	5/16″
T132	6″	5/16″
T132	8″	5/16″
T132	10″	5/16″
T132	12″	5/16″
T133	4″	3/8″
T133	6″	3/8″
T133	8″	3/8″
T133	10″	3/8″
T133	12″	3/8″

SQUARE BLADE
Clear Blue Plastic Handle

Cat. No.	Blade Length	Blade Diam.
T134	4″	5/16″ sq.
T134	6″	5/16″ sq.
T134	8″	5/16″ sq.
T134	10″	5/16″ sq.
T146	10″	3/8″ sq.
T146	12″	3/8″ sq.
T146	14″	3/8″ sq.

TANG THRU'
Clear Amber Plastic Handle

Cat. No.	Blade Length	Blade Diam.
T143	4″	1/4″
T143	6″	1/4″
T143	8″	1/4″
T144	4″	5/16″
T144	6″	5/16″
T144	8″	5/16″
T144	10″	5/16″
T145	8″	3/8″
T145	10″	3/8″
T145	12″	3/8″

INSULATED BLADE
Clear Maroon Plastic Handle

Cat. No.	Blade Length	Blade Diam.
T162	4″	3/16″
T162	6″	3/16″
T162	8″	3/16″
T162	10″	3/16″

RECESSED HEAD
SUPA-HARD RANGE
Clear Green Plastic Handle

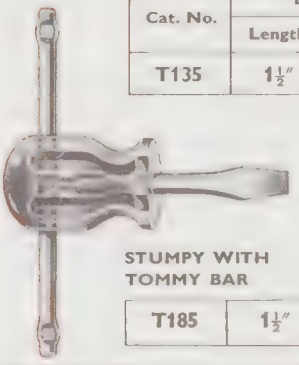
Cat. No.	Blade Length	Blade Diam.
T271	1½″	3/16″
T271	3″	3/16″
T272	1½″	1/4″
T272	4″	1/4″
T273	6″	5/16″
T274	8″	3/8″

TUF-TIP RANGE
Clear Blue Plastic Handle

T371	3″	3/16″
T372	4″	1/4″

STUMPY
Clear Blue Plastic Handle

Cat. No.	Blade Length	Blade Diam.
T135	1½″	1/4″



STUMPY WITH TOMMY BAR

T185	1½″	1/4″

JEWELLERS' SCREWDRIVERS

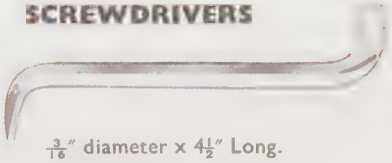
Pearl chrome plated body and chuck. Revolving hexagon cupped head. Hardened steel blade can be reversed in body.

777A with .025″ blade.
777B with .040″ blade.
777C with .055″ blade.
777D with .070″ blade.
777E with .085″ blade.
777F with .100″ blade.
777/1W Plastic Wallet Set Contains A B and C

777/2 Pocket set containing one screwdriver body, and six interchangeable blades, with widths from .025″ to .100″. Each blade is contained in a separate compartment marked with its appropriate identifying letter.

L1072

OFFSET SCREWDRIVERS



3/16″ diameter x 4½″ Long.
3/8″ diameter x 6″ Long.
½″ diameter x 6½″ Long.

SCREWDRIVER KITS

MECHANICS SET — T186

17¾″ long
7¼″ wide
1⅜″ deep

13 Assorted Standard and Recessed Head Screwdrivers comprising:

T117 x 4″	T132 x 8″	T146 x 12″	T272 x 4″
T125 x 4″	T135 x 1½″	T162 x 6″	T273 x 6″
T130 x 1¾″	T145 x 10″	T271 x 3″	T274 x 8″
T131 x 6″			

WALL RACK SET T181

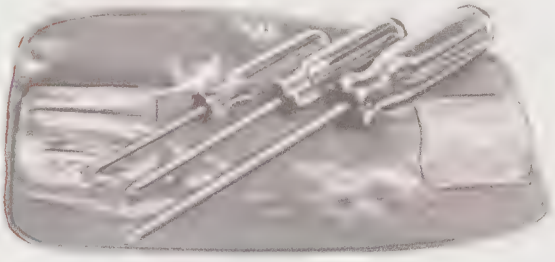
One each T117 x 3″, T125 x 4″, T130 x 1¾″, T131 x 6″, T132 x 6″, T135 x 1½″ Standard Screwdrivers

ROLL SET — T160

One each 1/8″, 3/16″, 1/4″ Standard Blades and No. 1 and 2, Recessed Head Blades. Clear Maroon Plastic Handle

ROLL SET — R1

One each T135 x 1½″, T117 x 3″, T125 x 4″, T131 x 6″ and T132 x 6″ Standard Screwdrivers



ROLL SET — R2

One each T271 x 3″, T272 x 4″ and T273 x 6″ Recessed Head Screwdrivers

RATCHET SCREWDRIVER

Clear Blue Plastic Handle

Cat. No.	Blade	
	Length	Diam.
T152	4″	1/4″
T152	5″	1/4″
T152	6″	1/4″
T152	8″	5/16″
T152	10″	5/16″

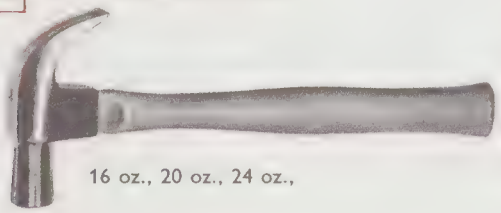
L1073 SPIRAL RATCHET SCREWDRIVER

Spring return type

Available in Light, Standard and Heavy Duty Pattern

HAMMERS AND MALLETS

L1074 STANDARD CLAW



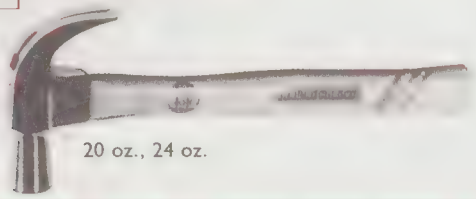
16 oz., 20 oz., 24 oz.,

L1075 ALL STEEL TUBULAR HANDLE

Also available Fibre Glass Handle

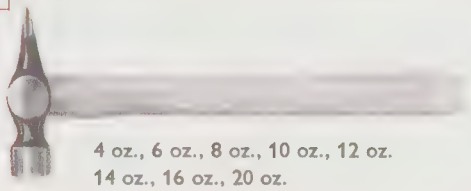
16 oz., 20 oz.

L1076 NAIL HOLDER



20 oz., 24 oz.

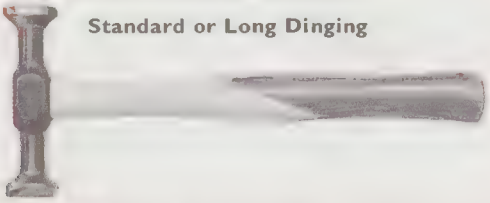
L1077 CROSS PEIN OR JOINERS



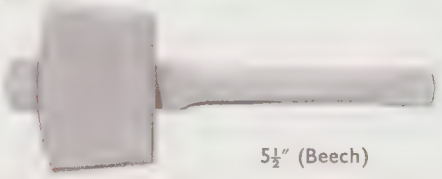
4 oz., 6 oz., 8 oz., 10 oz., 12 oz.
14 oz., 16 oz., 20 oz.

L1078 ROUND AND SQUARE

Standard or Long Dinging

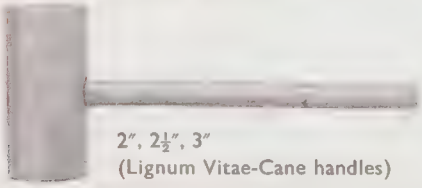


L1079 CARPENTERS' MALLETS



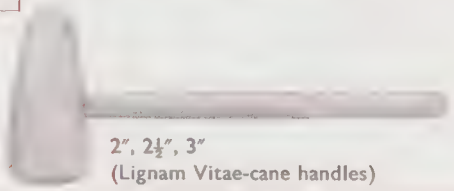
5½″ (Beech)

L1080 TINSMANS' MALLETS



2″, 2½″, 3″
(Lignum Vitae-Cane handles)

L1081 BOSSING MALLETS

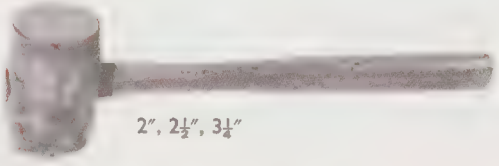


2″, 2½″, 3″
(Lignam Vitae-cane handles)

L1082 LEAD DRESSERS

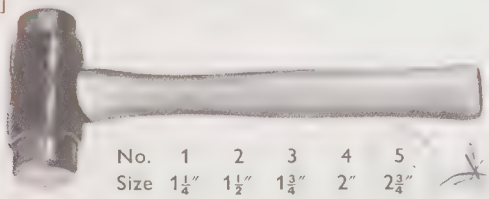
Small, Medium, Large
(Boxwood)

L1083 RUBBER MALLETS



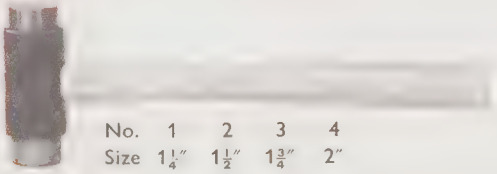
2″, 2½″, 3¼″

L1084 RAWHIDE HAMMERS



No.	1	2	3	4	5
Size	1¼″	1½″	1¾″	2″	2¾″

L1085 COPPER & RAWHIDE HAMMERS

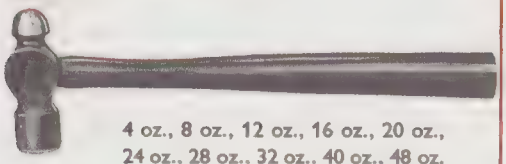


No.	1	2	3	4
Size	1¼″	1½″	1¾″	2″

Rawhide and Copper Replacement Faces available.

HAMMERS — Gum, Hickory or Ash Handles, HAMMERHEADS

L1086 BALL PEIN

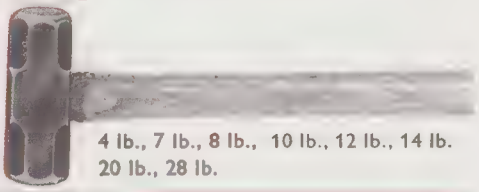


4 oz., 8 oz., 12 oz., 16 oz., 20 oz., 24 oz., 28 oz., 32 oz., 40 oz., 48 oz.

L1087 BALL PEIN HAMMER HEADS

16 oz., 20 oz., 24 oz., 28 oz. 32 oz., 40 oz., 48 oz.

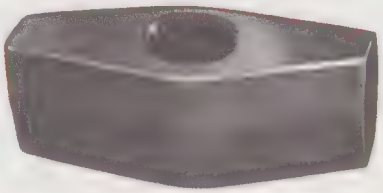
L1188 DOUBLE FACE



4 lb., 7 lb., 8 lb., 10 lb., 12 lb., 14 lb. 20 lb., 28 lb.

L1089 SPALLING

4 lb., 6 lb., 10 lb., 14 lb.



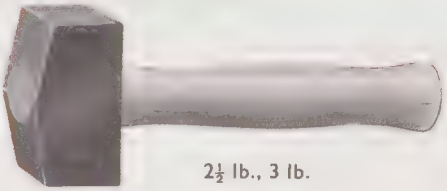
L1090 SPIKING

8 lb.

L1091 STRAIGHT PEIN STRIKING HAMMER

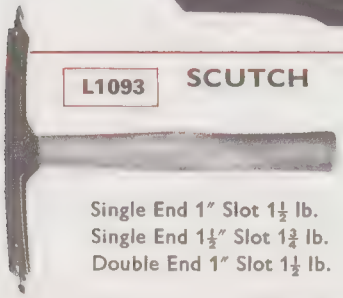
7 lb.
10 lb.
14 lb.

L1092 CLUB (MASONS')



2½ lb., 3 lb.

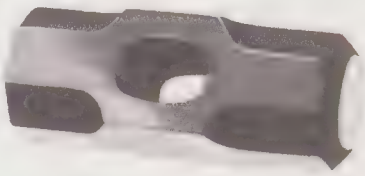
L1093 SCUTCH



Single End 1" Slot 1½ lb.
Single End 1½" Slot 1¾ lb.
Double End 1" Slot 1½ lb.

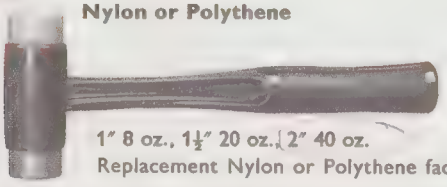
L1094 DOUBLE FACE HAMMER HEADS

STEEL 4 lb., 7 lb., 8lb., 10lb., 12 lb., 14 lb., 20 lb., 28 lb.
LEAD 4 lb. (5¼ lb.) 7 lb.
COPPER 2 lb., 4 lb., 7 lb., 8 lb. 10 lb, 12 lb., 14 lb.



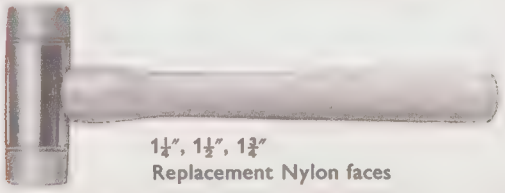
L1095 HUCKSON 701

Nylon or Polythene



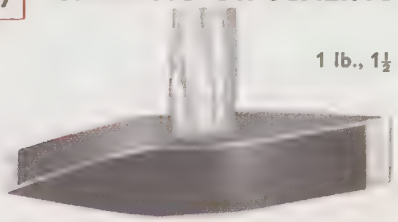
1" 8 oz., 1½" 20 oz., 2" 40 oz.
Replacement Nylon or Polythene faces

L1096 THOR PLASTIC HAMMERS



1¼", 1½", 1¾"
Replacement Nylon faces

L1097 CHIPPING OR SCALING



1 lb., 1½ lb.

L1098 WELDERS' CHIPPING

Rubber Grip or Steel Grip

ENGINEERS' COLD CHISELS

Forged Chisel Steel or Forged Alloy Steel

L1099 FLAT

Length overall	5″	6″	7″	8″	9″	10″	12″	18″	24″
Cutting Edge	$\frac{3}{8}$″	$\frac{1}{2}$″	$\frac{5}{8}$″	$\frac{3}{4}$″	$\frac{7}{8}$″	1″	1″	1″	1″

L1100 CROSSCUT

L1101 ROUND NOSE

L1102 GUTTERING

Length Overall	5″	6″	7″	8″	9″	10″
Hexagon Size	$\frac{3}{8}$″	$\frac{1}{2}$″	$\frac{5}{8}$″	$\frac{3}{4}$″	$\frac{7}{8}$″	1″
Cutting Edge	$\frac{3}{16}$″	$\frac{1}{4}$″	$\frac{5}{16}$″	$\frac{3}{8}$″	$\frac{7}{16}$″	$\frac{1}{2}$″

L1103 DIAMOND POINT

L1104 CAULKING CHISEL SIZE 6″

L1105 BARREL DRIFTS

$\frac{1}{4}$″, $\frac{3}{8}$″, $\frac{1}{2}$″, $\frac{5}{8}$″, $\frac{3}{4}$″, $\frac{7}{8}$″, 1″, 1$\frac{1}{8}$″, 1$\frac{1}{4}$″

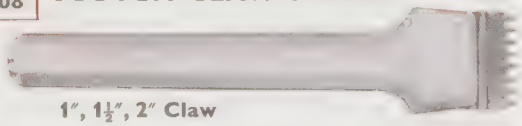
L1106 ROOFING OR PRICK PUNCHES

Flat 8″ x 1″ x $\frac{3}{8}$″
Round 6″ x $\frac{9}{16}$″, 7$\frac{1}{2}$″ x $\frac{5}{8}$″

L1107 PLUGGING CHISEL

Size 11″ x $\frac{1}{2}$″, 11″ x $\frac{5}{8}$″

L1108 SCUTCH CLAW HOLDER



1″, 1$\frac{1}{2}$″, 2″ Claw

L1109 MASONS POINT

10″ x $\frac{3}{4}$″, 12″ x $\frac{3}{4}$″, 14″ x $\frac{3}{4}$″, 18″ x $\frac{3}{4}$″, 24″ x $\frac{3}{4}$″

L1110 STAR DRILLS Length Overall 12″

$\frac{3}{8}$″, $\frac{1}{2}$″, $\frac{5}{8}$″, $\frac{3}{4}$″, $\frac{7}{8}$″, 1″, 1$\frac{1}{8}$″, 1$\frac{1}{4}$″

L1112 GADS

Chisel Point 4″ x 1$\frac{1}{8}$″, 5″ x 1$\frac{1}{8}$″, 6″ x 1$\frac{1}{8}$″, 7″ x 1$\frac{1}{4}$″
8″ x 1$\frac{1}{4}$″, 10″ x 1$\frac{1}{4}$″, 12″ x 1$\frac{1}{4}$″

Diamond Point 12″ x 1$\frac{1}{4}$″, 15″ x 1$\frac{1}{4}$″, 18″ x 1$\frac{1}{4}$″,
24″ x 1$\frac{1}{4}$″

L1111 BRICK BOLSTER

2$\frac{1}{2}$″, 4″, 4$\frac{1}{2}$″ Blade

PUNCHES

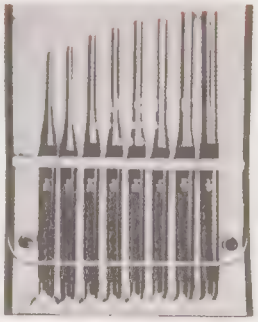
L1113 INSERTED PIN PUNCHES

	Pin Diam.	Pin Length	Body Diam.	Length Overall		Pin Diam.	Pin Length	Body Diam.	Length Overall
84A	1/16"	3/4"	5/32"	4"	E	1/4"	2"	7/16"	5"
B	3/32"	1"	5/32"	4"	F	5/16"	2 1/4"	1/2"	6"
C	1/8"	1 1/4"	7/16"	4"	G	3/8"	2 1/2"	9/16"	7"
D	3/16"	1 3/8"	3/8"	4 1/2"					

L1114 PARALLEL PIN PUNCHES

Length Overall	Body Diam.	Point Diam.	Length Overall	Body Diam.	Point Diam.
4"	3/8"	1/16"	6"	3/8"	5/32"
4"	3/8"	3/32"	6"	3/8"	1/16"
4"	3/8"	1/8"	6"	3/8"	3/32"
4"	3/8"	5/32"	7"	3/8"	1/8"
4"	3/8"	1/16"	7"	3/8"	9/32"
4"	3/8"	3/32"	7"	3/8"	5/16"
4"	3/8"	1/4"	7"	3/8"	3/8"
6"	3/8"	3/32"	7 1/2"	3/8"	1/2"
6"	3/8"	1/8"	8"	3/8"	1/4"

PARALLEL PIN PUNCH SETS



L1115 SET OF 7 PUNCHES, 4" Long. Sizes: 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4"

L1116 SET OF 6 PUNCHES, 6" Long. Sizes: 1/16", 3/32", 1/8", 5/32", 3/16", 7/32"

L1117 SET OF 8 PUNCHES, 7" Long. Sizes: 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8"

L1118 SET OF 8 PUNCHES, 4" Long in Wooden Box, 1/16" to 5/16"

L1119 SET OF 8 PUNCHES, 4" Long in plastic Case, 1/16" to 5/16"

L1120 SET OF 5 PUNCHES, 8" Long in plastic Case, 1/4" to 3/8"

L1121 CENTRE PUNCHES Round Head

Length Overall	Body Diam.	Point Diam.	Length Overall	Body Diam.	Point Diam.
4"	3/8"	1/16"	5"	1/2"	1/4"
4"	3/8"	3/32"	4"	3/8"	1/4"
4"	3/8"	1/8"	5"	3/8"	1/16"
4"	3/8"	5/32"	6"	1/2"	3/8"
4"	3/8"	1/16"	6"	3/4"	1/2"
4"	3/8"	1/4"	7"	1/2"	1/2"
5"	1/2"	3/16"			

L1123 CENTRE PUNCH Square Head

4" x 3/8" x 1/16", 3/32", 1/8", 5/32", 3/16", 1/4"

CENTRE PUNCH SETS

L1122 ROUND HEAD
Set of 5: 1/16", 3/32", 1/8", 5/32", 3/16"

L1124 SQUARE HEAD
Set of 5: 1/16", 3/32", 1/8", 5/32", 3/16"

L1125 NAIL PUNCHES Round Head

Length Overall 4"
Body Diameter 3/8"
Point Diameter 1/32", 1/16", 3/32", 1/8", 5/32", 3/16"

L1126 NAIL PUNCH SET Round Head

Set of 5: 1/16", 3/32", 1/8", 5/32", 3/16"

L1128 NAIL PUNCH SET Square Head

Set of 5: 1/16", 3/32", 1/8", 5/32", 3/16"

L1127 NAIL PUNCHES Square Head

4" x 3/8", 1/32", 1/16", 3/32", 1/8", 5/32", 3/16"

L1129 FLOORING PUNCH

5" x 1/2" x 1/8", 5/32", 3/16"

L1130 HOLLOW PUNCH

Length: 4" to 5"
Sizes: 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 5/32", 3/16", 11/32", 3/8", 13/32", 7/16", 15/32", 1/2"

L1131 HOLLOW PUNCH SET

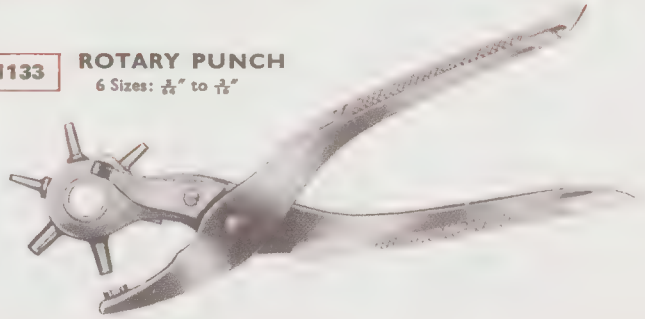
Set of 6: 3/16", 1/4", 5/16", 3/8", 7/16", 1/2"

L1132 WAD PUNCHES

Cutting Sizes: 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1", 1 1/16", 1 1/8", 1 3/16", 1 1/4", 1 5/16", 1 3/8", 1 7/16", 1 1/2", 1 5/8", 1 3/4", 1 7/8", 2", 2 1/4", 2 1/2", 2 3/4", 2 5/8", 2 3/4", 2 7/8", 3"

L1133 ROTARY PUNCH

6 Sizes: 3/64" to 7/16"



BLACKSMITHS' ANVIL TOOLS

L1134

FLATTENERS
With Eye or
Wire Handle

L1138

TOP SWAGE
with Eye

L1140

HOT SET
with Eye or Wire Handle

L1135

HARDIES

L1139

BOTTOM SWAGE

L1141

COLD SET
with Eye or Wire Handle

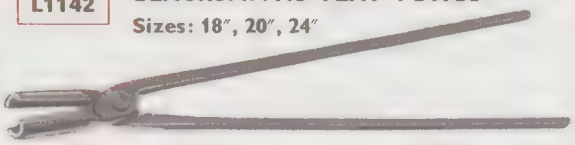
L1136

TOP FULLER with Eye

L1142 BLACKSMITHS' FLAT TONGS
Sizes: 18″, 20″, 24″

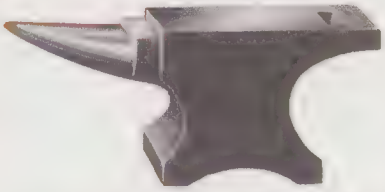
L1137

BOTTOM FULLER



L1143 BLACKSMITHS' ROUND NOSE TONGS
Sizes: 18″, 20″, 24″

L1144 **BLACKSMITHS' ANVILS**



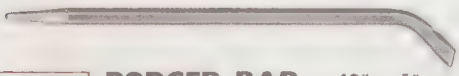
Sizes: 28, 56, 84, 112, 140, 168, 244, 280 and 336 lbs.

L1145 **HAND FORGES**

RAPID No. 1
18″, 22″ and 24″
RAPID No. 3
30″ x 24″ x 6″ Deep
Spare Parts available

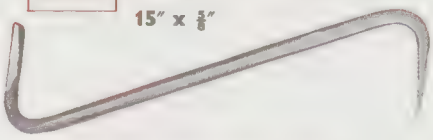
L1146 **WRECKING BARS**

Length	12″	18″	24″	30″	36″
Hexagon Bar	½″	⅝″	¾″	¾″	¾″

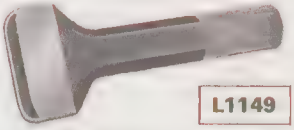


L1146a **PODGER BAR** 18″ x ⅝″

L1147 **CASE OPENERS**
15″ x ⅝″



L1148 **NAIL PULLERS**
Length 18½″



L1149

GROOVERS
⅛″, 3/16″, ¼″, 5/16″, ⅜″, 7/16″, ½″, 9/16″, ⅝″

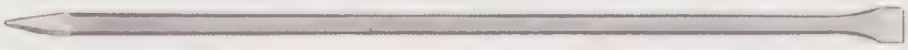
L1150

RIVET SET
⅛″, 5/32″, 3/16″, 7/32″, ¼″, 5/16″, ⅜″

L1151 **SPUD BARS**

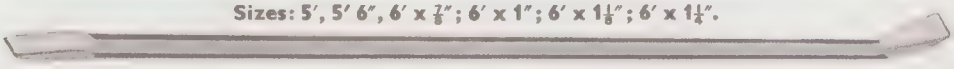
Size- 6′ x 1⅛″

L1152 **CROW BARS**



Sizes: 5′, 5′ 6″, 6′ x ⅞″; 6′ x 1″; 6′ x 1⅛″; 6′ x 1¼″.

L1153 **PINCH BARS**



Sizes: 2′ 6″, 3′, 5′ 6″, 6′ x 1″; 6′ x 1⅛″; 6′ x 1¼″.

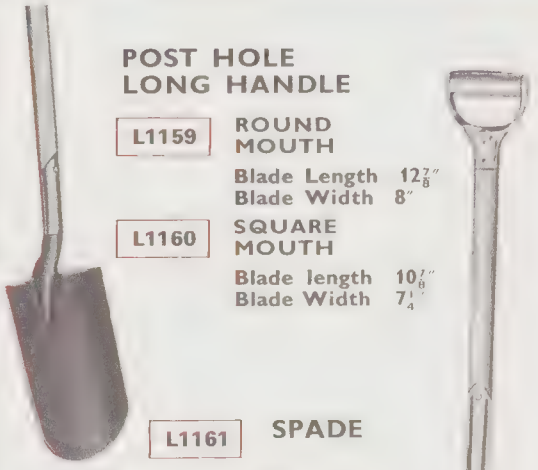
SHOVELS

LONG HANDLE OR "D" HANDLE

No.	Width of Blade	Length of Blade
ROUND MOUTH		
0	9″	11¼″
1	9½″	11½″
2	10″	12¼″
3	10½″	12¾″
4	11″	13¼″
5	12½″	13¾″
5	12″	14¼″
7	12½″	14⅞″
8	13″	15¼″
SQUARE MOUTH		
1	10″	11¾″
2	10¼″	12¼″
3	10¾″	12¾″
4	11⅛″	13¼″
5	11½″	13¾″

L1155 L1154 L1156 L1157

POST HOLE LONG HANDLE



L1159 ROUND MOUTH
Blade Length 12⅞″
Blade Width 8″

L1160 SQUARE MOUTH
Blade length 10⅞″
Blade Width 7¼″

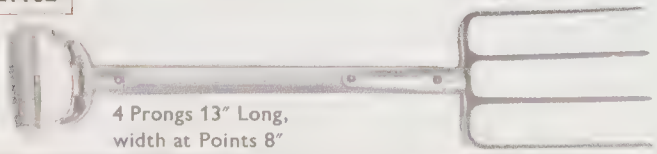
L1161 SPADE

	Blade Length	Blade Width
0	11″	7″
1	11″	7″
2	11⅛″	7½″

L1158 TRENCHING

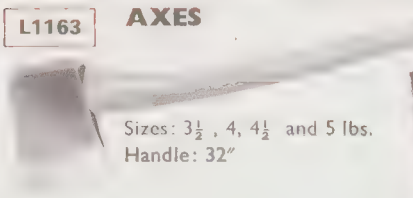
	Blade Length	Blade Width
1 (Untreated)	12¼″	3⅞″
2 (Treaded)	11¾″	4⅛″

L1162 STANDARD DIGGING FORK



4 Prongs 13″ Long, width at Points 8″

L1163 AXES



Sizes: 3½, 4, 4½ and 5 lbs.
Handle: 32″

L1164 HATCHETS
Size 3″

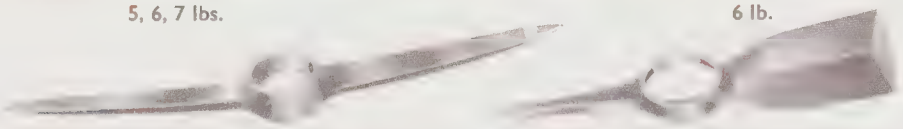
L1170 ADZE—CARPENTERS' PIN-EYE
3½ lb.

PICKS

L1165 POINT AND CHISEL (Muck) PICK
5, 6, 7 lbs.

L1167 ROCK
6 lb.

L1168 MINERS
Ballarat Pattern
4½ lb.



L1166 DOUBLE POINT PICK
2½, 5, 6, 7 lb.

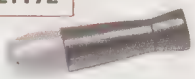
L1169 GRUBBING OR CUTTER END MATTOCK
4, 4½, 5 lb.

TOOL HANDLES — Spotted Gum or Hickory

L1171 FILE AND SOLDERING IRON HANDLES

3″, 4″, 5″, 6″

L1172 FILE HANDLES — PLASTIC



No. 6 up to 4″
No. 7 4″ to 10″
No. 9 over 10″

L1173 AXE HANDLES

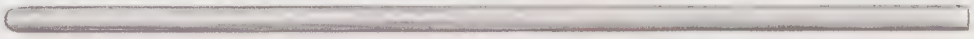
24″, 28″, 32″, 36″

L1174 SLEDGE HAMMER HANDLES

Handle Length	24″	30″	36″	42″
Hammer Head Size	4	7	10	14 lbs.

L1175 "D" TYPE SHOVEL HANDLES
Galvanised, Aluminium or Wood "D"

L1176 BROOM — 4′ 6″, 5′, 6′



L1177 LONG SHOVEL HANDLES — 6′

L1178 PICK HANDLES — 30″, 32″

L1179 SHOD PICK HANDLES — 30″, 32″

L1180 CARPENTERS' CLAW HAMMER HANDLES

13″ — 16 oz. Head
13⅜″ — 20 and 24 oz. Head

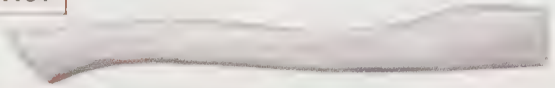
L1181 ENGINEERS' HAMMER HANDLES

Handle Length	10″	12″	13″	14″	15″	16	18″
Hammer Head Size	4 oz.	8 oz.	12 oz.	16 oz.	20 oz. 24 oz.	28 oz. 30 oz.	40 oz. 48 oz.

L1182 CLUB OR MASONS' HAMMER — 10″

L1183 ADZE

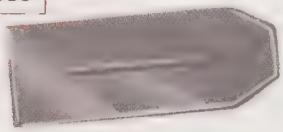
L1184 HATCHET — 15″



L1185 BALLARAT PICK

WEDGES

L1186 TIMBER WEDGES



6″, 8″, 10″, 12″

L1187 FOX WEDGES

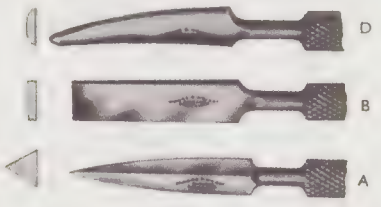
4″ x 1″ x ⅜″ to $\frac{1}{16}$″

L1188 HANDLE WEDGES

Zinc Alloy or Wood for Hammer or Axe.

SCRAPERS

ENGINEERS' SCRAPER
Steel tube handle



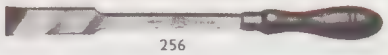
91

Available in three shapes —

A Triangular, hollow ground on sides.
B Flat, for surface work.
D Curved half-round, for bearings.

Scraper Number	
91X	Set of three 6″, one each A, B and D, in wooden box.
92X	Set of three 10″ one each A, B and D, in wooden box

ERECTORS' SCRAPER


256

257

256	Flat cutting edge. 8¼″ blade, 5″ handle, 13¼″ overall length.
257	Curved cutting edge. 9″ blade, 5″ handle, 14″ overall length.

"MOORITE" SCRAPER

258

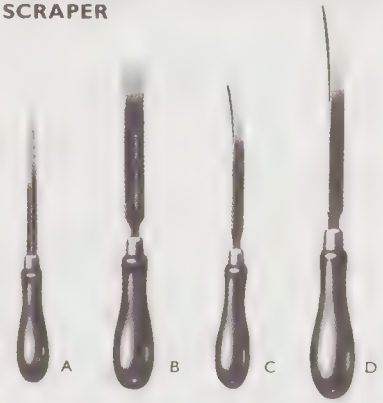
258/6	6″ Scraper.
258/8	8″ Scraper.
258	Set of 3 Scrapers, one each — 4″, 6″ and 8″.

BEARING SCRAPER

533

533	M.W forged hollow out of solid bar, with three cutting edges.

ENGINEERS' WOOD HANDLED SCRAPER



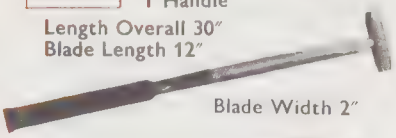
95	Set of 3 scrapers. One each three-square 4″ blade, flat 4″ blade and half-round 4″ blade.
96A	Three-square 4″ blade.
96B	Flat 4″ blade.
96C	Curved 4″ blade.
96D	Curved 5″ blade.
96	Set of 4 scrapers, as above.
97A	Three-square 5½″ blade.
97B	Flat 6″ blade.
97C	Curved 6″ blade.
97D	Curved 8″ blade.
97	Set of 4 scrapers, as above.
99A	Three-square 8″ blade.
99B	Flat 8″ blade.
101A	Three-aquare 12″ blade.
101B	Flat 12″ blade
101D	Curved half-round 12″ blade.

DIMENSIONS OF SCRAPERS

Scraper Nos.	Overall Length in.	Length of Blade in.	Length of Cutting edge in.	Width of Cutting edge in.	Scraper Nos.	Overall Length in.	Length of Blade in.	Length of Cutting edge in.	Width of Cutting edge in.
96A	8	4	2½	—	B	13	7½	—	1
B	8	4	—	5/16	101A	17½	12	6	—
C	8	4	1¾	—	B	17½	11½	—	1⅜
D	9	5	2	—	D	18½	12	6	—
97A	10	5¾	3	—	256	13½	8½	—	1⅛
B	10¾	6½	—	13/16	257	14	9	4½	—
C	10½	6	3¼	—	258/6	9½	6	2	—
D	14	8½	4½	—	258/8	11½	8	2½	—
99A	13½	8½	4½	—	533	10¾	6¾	2¾	—

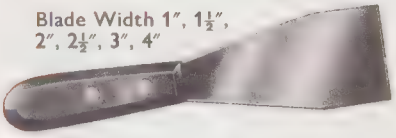
L1190 SHIP SCRAPERS
4″, Length 15″

L1191 SHIP SCRAPERS
T Handle
Length Overall 30″
Blade Length 12″
Blade Width 2″



L1192 BENT SCRAPERS
10″ x 1½″

L1193 PAINT SCRAPERS
Blade Width 1″, 1½″, 2″, 2½″, 3″, 4″

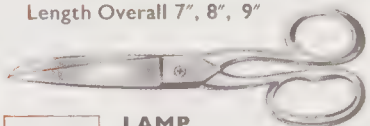


L1194 PUTTY KNIFE
Length of Blade 4½″

L1195 SHAVE HOOK HEART SHAPE
1½″

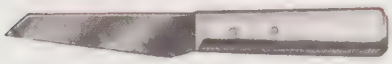
L1196 SHAVE HOOKS TRIANGULAR
1½″

L1197 SCISSORS
Length Overall 7″, 8″, 9″



L1198 LAMP SCISSORS

L1199 **BOOT KNIVES**
4″ Blade



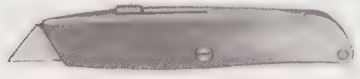
L1200 **PACKING KNIVES**
6″ Blade

L1201 **LINO KNIFE**

TRIMMING KNIVES

L1202 **FIXED BLADE**
Three-way. Scorer, cutter, scraper.

L1203 **RETRACTABLE BLADE**
Three cutting positions



REPLACEMENT BLADES

L1204

2″ Long in Packets of 5, 10, 100

L1205 **L1206** **L1207**

ANGLED CONCAVE CONVEX

L1208 **HOOKED**
Packets of 5, 50

L1209 **SCORING BLADE**
Packets of 2, 20
Scores Formica and other laminates for a quick, clean break.

WOODWORKING CHISELS

L1210 **FIRMER TANG CHISELS — Bevelled Edge**

Sizes: $\frac{1}{8}$″, $\frac{3}{16}$″, $\frac{1}{4}$″, $\frac{5}{16}$″, $\frac{3}{8}$″, $\frac{7}{16}$″, $\frac{1}{2}$″, $\frac{5}{8}$″, $\frac{3}{4}$″, $\frac{7}{8}$″, 1″, $1\frac{1}{8}$″, $1\frac{1}{4}$″, $1\frac{3}{8}$″, $1\frac{1}{2}$″, $1\frac{5}{8}$″, $1\frac{3}{4}$″, $1\frac{7}{8}$″, 2″

L1211 **REGISTERED TANG CHISELS — Plain Edge**

Sizes: $\frac{1}{8}$″, $\frac{3}{16}$″, $\frac{1}{4}$″, $\frac{5}{16}$″, $\frac{3}{8}$″, $\frac{7}{16}$″, $\frac{1}{2}$″, $\frac{5}{8}$″, $\frac{3}{4}$″, $\frac{7}{8}$″, 1″, $1\frac{1}{8}$″, $1\frac{1}{4}$″, $1\frac{3}{8}$″, $1\frac{1}{2}$″, $1\frac{5}{8}$″, $1\frac{3}{4}$″, $1\frac{7}{8}$″, 2″

Also available:— Other types and chisel sets

L1212 **HAND GRINDERS**

Enclosed Gear Drive Adjustable Tool Rest fitted with 6″x1″ grinding wheel

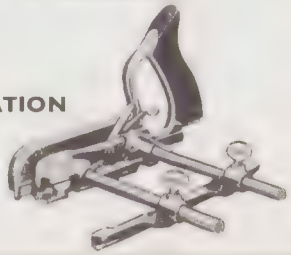
L1213 **PLANES**

No.	Type	Length	Width of Cutter
3	Smooth	$9\frac{1}{2}$″	$1\frac{3}{4}$″
4	Smooth	$9\frac{3}{4}$″	2″
$4\frac{1}{2}$	Smooth	$10\frac{1}{4}$″	$2\frac{3}{8}$″
5	Jack	14″	2″
$5\frac{1}{2}$	Jack	15″	$2\frac{3}{8}$″
6	Fore & Jointer	18″	$2\frac{3}{8}$″
7	Fore & Jointer	22″	$2\frac{3}{8}$″
10	Bench Rebate	13″	$2\frac{1}{8}$″
$10\frac{1}{2}$	Bench Rebate	$9\frac{1}{4}$″	$2\frac{1}{8}$″

L1214 **BLOCK PLANES**

No.	Length	Width of Cut.
102	$5\frac{1}{2}$″	$1\frac{5}{16}$″
220	7″	$1\frac{5}{8}$″

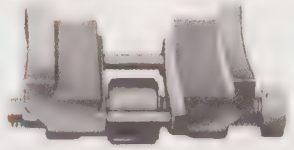
No. 50 COMBINATION
Length $8\frac{5}{8}$″
17 Cutters



L1215 **REBATE PLANES**

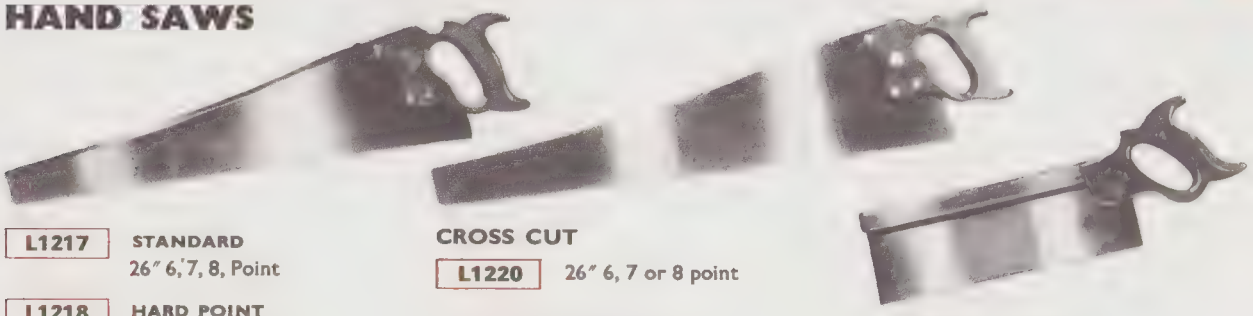
No.	Length	Width of Cut.
92	$5\frac{1}{2}$″	$\frac{3}{4}$″
93	$6\frac{1}{2}$″	1″
75 (Bull Nose)	4″	$1\frac{3}{32}$″

L1216 **HONING GUIDE**



No. 36 Wood chisels and plane irons from $\frac{1}{16}$″ to $2\frac{5}{8}$″ wide

HAND SAWS



L1217 STANDARD
26″ 6, 7, 8, Point

L1218 HARD POINT
22″, 24″ 8 Point
26″ 7 point

RIP SAWS

L1219 26″ 4½ point
28″ 4 point

CROSS CUT

L1220 26″ 6, 7 or 8 point

TENNON (Back saw)

L1221 STANDARD
10″, 12″, 14″

L1222 HARD POINT
10″, 14″

UNIVERSAL SAW

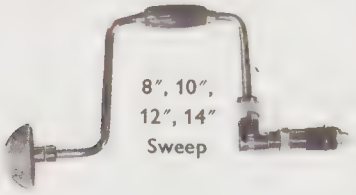
L1223 22″ 10 point, 24″ 8 point, 26″ 7 point

ALL CUT

L1224 24″ 8 point

L1225 BOW SAW
(Bushman's) 24″, 30″, 36″

L1229 CARPENTERS' RATCHET BRACE



8″, 10″, 12″, 14″ Sweep

SAWSETS

No.	Description	Capacity	
		Tooth size	Saw thickness
77	For hand saws	4 to 12 points per inch	Up to 16G.
78	For cross-cut saws	½″ to 1½″ tooth pitch	Up to 13G.
79	For circular saws	½″ tooth pitch and over	Up to 10G.

L1228 No. 79

L1227 No. 78

L1226 No.77

AUGER BITS

L1230 EXPANDING BITS

Sizes: ½″-1½″ & ⅞″-3″

L1231 HARDWOOD SINGLE SCREW

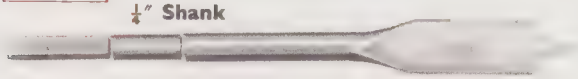
L1232 SOFTWOOD DOUBLE CUTTER

Sizes		
¼″	9/16″	⅞″
5/16″	⅝″	15/16″
⅜″	11/16″	1″
7/16″	¾″	1⅛″
½″	13/16″	1¼″

L1233 SCOTCH PATTERN MACHINE AUGERS

Sizes: ¼″, 5/16″, ⅜″, 7/16″, ½″, 9/16″, ⅝″, 11/16″, ¾″, 13/16″, ⅞″, 15/16″, 1″, 1⅛″, 1¼″

L1234 POWER BITS (Speed bore)
¼″ Shank



Sizes: ⅜″, 7/16″, ½″, 9/16″, ⅝″, 11/16″, ¾″, 13/16″, ⅞″, 15/16″, 1″

L1235 SCOTCH PATTERN DOUBLE TWIST AUGER BITS

Sizes: ⅜″, 7/16″, ½″, 9/16″, ⅝″, 11/16″, ¾″, 13/16″, ⅞″, 15/16″, 1″, 1⅛″, 1¼″, 1½″

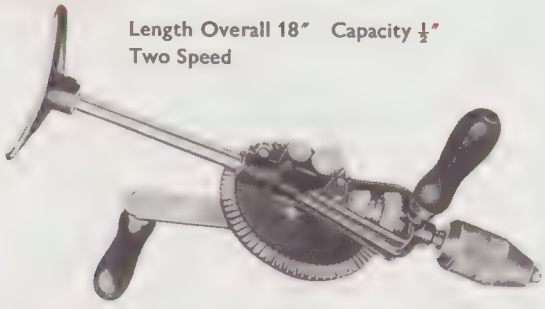
L1236 BULL NOSE AUGER

Sizes: ⅜″, 7/16″, ½″, 9/16″, ⅝″, 11/16″, ¾″, 13/16″, ⅞″, 15/16″, 1″, 1⅛″, 1¼″, 1½″

BREAST DRILLS

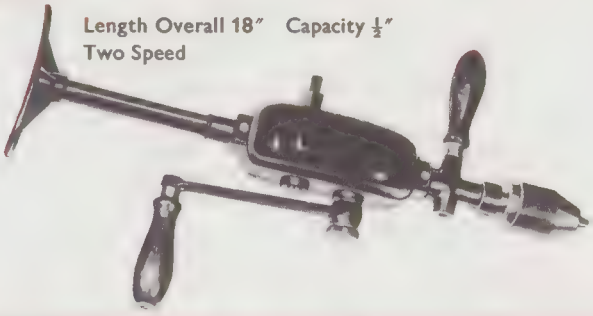
L1237 **OPEN GEAR TYPE**

Length Overall 18″ Capacity $\frac{1}{2}$″
Two Speed



L1238 **ENCLOSED GEAR TYPE**

Length Overall 18″ Capacity $\frac{1}{2}$″
Two Speed

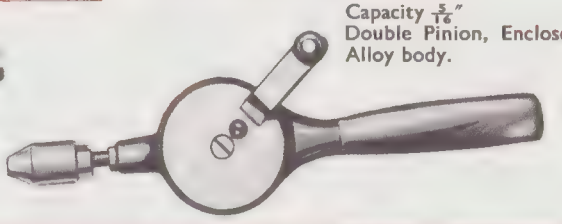


L1239 **HAND DRILLS (Single Pinion)**

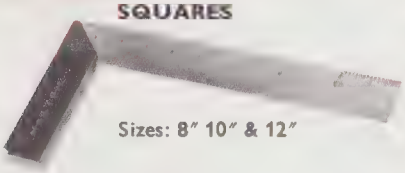
Capacity $\frac{1}{4}$″, $\frac{5}{16}$″

L1240 **HAND DRILLS (Double Pinion)**

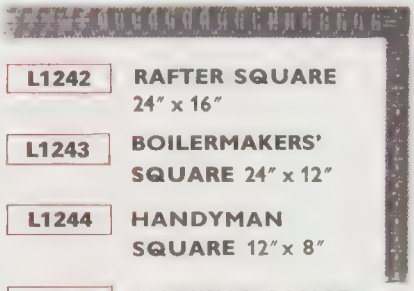
Capacity $\frac{5}{16}$″
Double Pinion, Enclosed gear.
Alloy body.



L1241 **CARPENTERS' SQUARES**



Sizes: 8″ 10″ & 12″



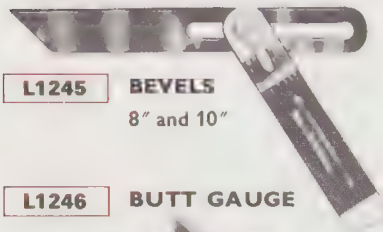
L1242 **RAFTER SQUARE** 24″ x 16″

L1243 **BOILERMAKERS' SQUARE** 24″ x 12″

L1244 **HANDYMAN SQUARE** 12″ x 8″

L1247 **MARKING GAUGE**

L1245 **BEVELS**
8″ and 10″



L1246 **BUTT GAUGE**

Dimensions in Inches
$2\frac{1}{2}$ x $1\frac{7}{8}$ x $1\frac{1}{2}$

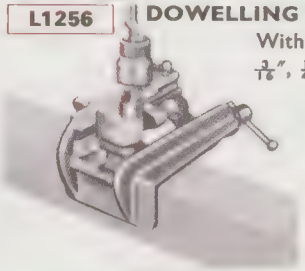
Capacity in Inches
$1\frac{3}{8}$

L1248 **MORTICE GAUGE**

L1249 **PLUMB BOB**

Sizes: 4 oz. 6 oz. 8 oz.
12 oz.16 oz. 20 oz.
24 oz. 28 oz. 32 oz.
40 oz. & 48 oz.

L1256 **DOWELLING JIG**
With 6 guides
$\frac{3}{16}$″, $\frac{1}{4}$″, $\frac{5}{16}$″, $\frac{3}{8}$″, $\frac{7}{16}$″, $\frac{1}{2}$″



L1250 **CARPENTERS' PENCILS**
Medium hard

L1251 **NYLON CHALK LINES**
60′ hanks interconnected

L1252 **MEDIUM COTTON LINES**
60′ hanks interconnected

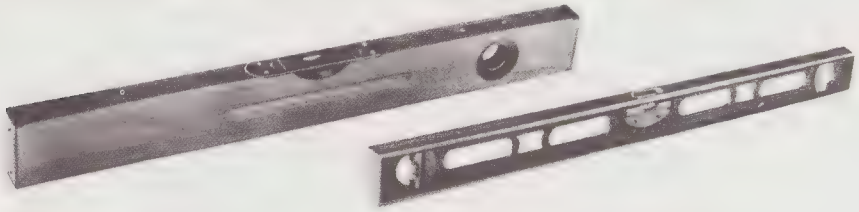
L1253 **BOILERMAKERS' FINE COTTON LINES**
60′ hanks interconnected

L1254 **BUILDERS' LINES**
Macrame 4 oz. Reel 415′

L1255 **CHALK LINE REEL** 100′
Refills — Blue, Red, White

L1257 **BENCH STOP**

BUILDERS' PLUMB AND SPIRIT LEVELS



L1258 **HARDWOOD**
Plain or Metal Tipped

Available: Single Level, Single Plumb
Single Level, Double Plumb
Double Level, Single Plumb
Double Level, Double Plumb

Lengths: 12", 18", 24", 30", 32", 36", 42", 48"

L1259 **ALUMINIUM**
Extruded
Lengths: 18", 24", 30", 36", 48"

L1260 **ALUMINIUM**
Cast
Lengths: 24", 30", 36", 48

L1261 **ALUMINIUM**
Precision Cast
Lengths: 16", 24", 32"

L1262 **CAST IRON**
Vee-Grooved Base

Lengths: 9", 12", 18", 24"

L1263 **DRAINER'S LEVEL**
Adjustable

Length: 7¼"

L1265 **COWLEY AUTOMATIC LEVEL**

Components:
Instrument Head,
Tripod,
Staff,
Target: 24", 36"
Bricklayer's Stand
Leather Case
Range: 6" to 150'

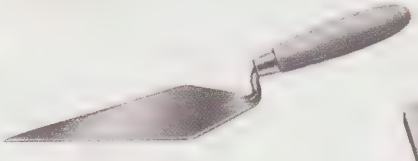
L1264 **ALUMINIUM LINE AND SURFACE LEVEL**
3" Long

TROWELS

L1266 **BRICK TROWEL**
Left or Right Hand

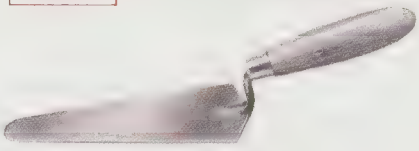
Lengths: 10", 11", 12", 13"

L1267 **POINTING TROWEL**



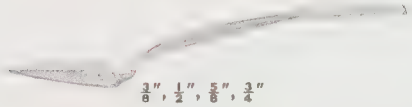
Lengths: 5", 6", 7", 8"

L1268 **GAUGING TROWEL**



Lengths: 6", 7", 8", 9"

L1269 **SMALL TOOL**
Trowel and Square



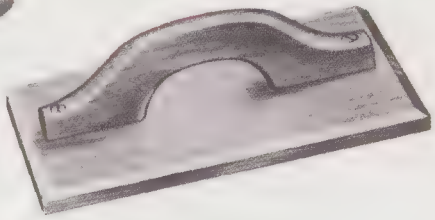
⅜", ½", ⅝", ¾"

L1270 **PLASTERER'S TROWEL**

5 Rivet — Single Hung
10 Rivet — Single Hung or Double Hung

Size: 11" x 4⅝"

L1271 **WOOD FLOAT**



Size: 11" x 4⅜"

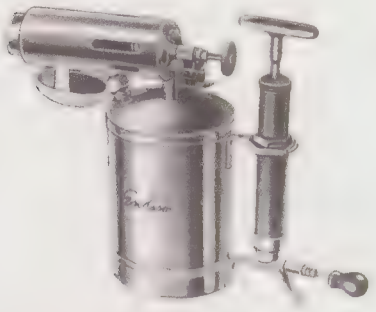
L1272 **WOOD FLOAT**
with Foam Plastic Float
Size: 11¼" x 4⅜"

L1273 **FIBRO CUTTERS**

No. 1: 1½" Blade, Cuts 3/16" Thickness
No. 2: 3" Blade, Cuts 5/16" Thickness
No. 4: Tilux Special

L1274

BRAZING LAMPS



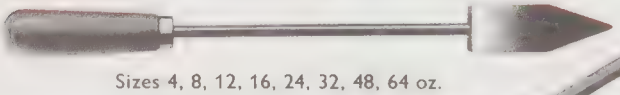
Sizes 2, 3½ and 5 pint capacity.

L1275

BLOW LAMPS

Size 1 Pint Capacity.

L1276 **SOLDERING IRONS**



Sizes 4, 8, 12, 16, 24, 32, 48, 64 oz.

L1277 **LADLES**

Welded Handles
Diameter of Ladle
3″, 4″, 5″, 6″, 8″.

L1278 **MELTING POTS** Cast Iron 6″, 9″, 12″ diameter.

L1281 **CROCKATT "SIMPLEX" VALVE RESEATER**

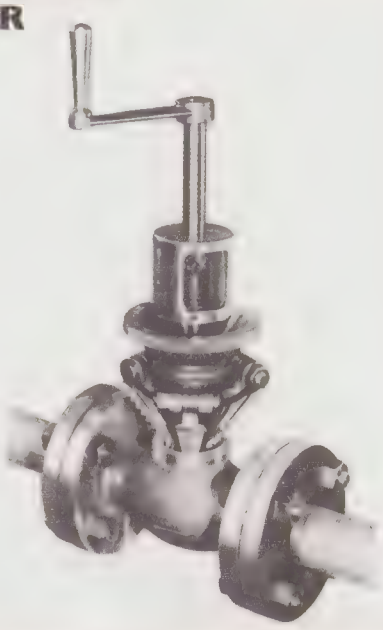
SIZES: **O** for Valves ⅜″ to 1½″
A for Valves ¾″ to 3″
B for Valves 1″ to 6″

The Crockatt "Simplex" Valve Reseater is simple to operate and makes a well-finished valve seat. One man can take the reseater to the valve, break the valve cover joint, insert the reseater and face without moving the Valve Body.

THE VALVE RESEATER

Is self-centring in the valve body.
Is suitable for flat or mitred seats.
Is adjustable for any size of valve within its range.
Permits the seat to be seen whilst being faced.
Makes a true face free from chatter.
Is packed in hinged wooden box.

The valve reseating machine is a necessity in the steam plant whether ashore or afloat. With it the engineer can keep valves in good condition without the delay and expense of removing the valve bodies from the pipeline.



PRIMUS PRICKERS AND BLOWLAMP REPLACEMENT PARTS
are available from stock.

ELECTRIC SOLDERING IRON

L1279 **240 VOLT CONTINUOUS USE**

Watts	Bit Size	Watts	Bit Size
30	3/16″	200	¾″
40	¼″	250	⅞″
50	¼″	300	1″
60	5/16″	350	1″
75	5/16″	400	1¼″
80	⅜″	450	1¼″
90	⅜″	500	1½″
100	7/16″	750	1½″
130	½″	1000	1¾″
150	⅝″	—	—

L1280 **3 VOLT BATTERY OR TRANSFORMER MODEL**

L1283 **TAP RESEATERS**

No. 187 ½″ and ¾″ B.S.P. Taps

TOOL BOXES

C.L.1 Size 18″ x 7½″ x 7½″
Fitted with Cantilever Tray
Also Available Light Duty C.L.2

C.L.3 Size 17½″ x 5½″ x 5½″
Solid Drawn lid and Cantilever Tray.

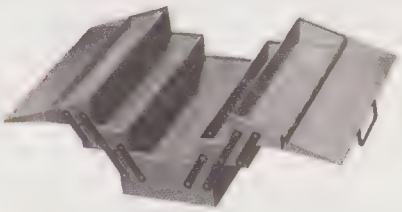
C.L.6 Size 21″ x 9½″ x 11″
Fitted with Cantilever Tray, Top and End Carrying Handles

Portable COMBINED TOOLBOX AND PARTS DRAWERS

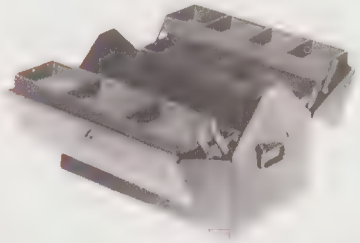
fitted with Cantilever Tray and 4 Drawers.

T.C.D.1 17⅛″ x 8″ x 8¾″. Weight 11 lb.

T.C.D.2 21″ x 8″ x 10½″. Weight 17 lb.



T.C.3 17″ x 8½″ x 8¾″ Five-tray Chest with fixed base compartment and 4 movable Trays.



T.C.6 Five Tray Chest, 20″ x 12½″ x 12⅛″. with fixed base compartment and 4 movable Trays. Side Handles.

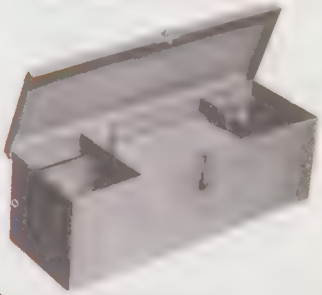
T.C.14 24⅛″ x 12½″ x 12⅛″

T.C.1 Size 18″ x 7½″ x 11″ Fitted with Fixed Tray and Three Drawers. Also End Carrying Handles

S.T.1 Heavy Duty Box, 21″ x 9½″ x 11″, with Top and End Carrying Handles, sliding Half Tray fitted with Carrying Handle.

S.T.2 18″ x 7½″ x 7½″, with solid drawn lid. Half Sliding Tray, without Handles.

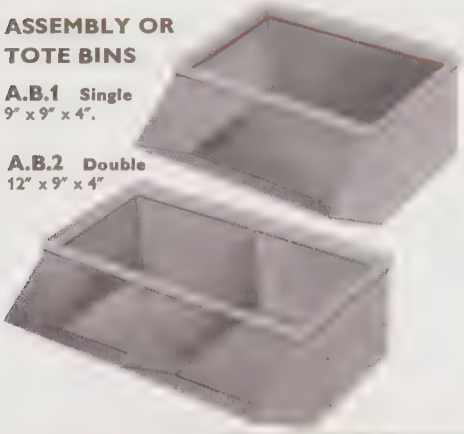
S.T.3 33″ x 9″ x 10½″. Lid has a channel sleeve to hold two Saws. A Sliding Tray with Carrying Handle, is divided to accomodate chisels, bits, punches, etc.



H.2. All-purpose Box, 16″ x 5½″ x 5″, with half-sliding tray

H.1 Similar to H.2 but without tray.

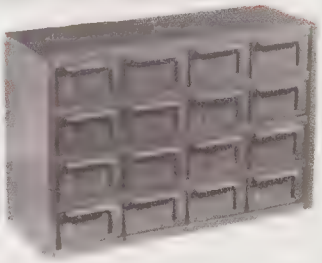
ASSEMBLY OR TOTE BINS



A.B.1 Single
9″ x 9″ x 4″.

A.B.2 Double
12″ x 9″ x 4″

CHEST OF DRAWERS



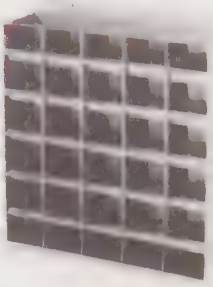
C.D. 1, 2 and 3 Drawer size is 6⅛″ x 3¾″ x 2½″

C.D.1 has 16 drawers

C.D.2 has 16 triple-compartmented drawers.

C.D.3 has 8 triple compartments and 8 undivided drawers

L1283 PIGEON HOLE CABINET



Till Type Drawer Size 27″ x 25″ x 5½″ Bin Size 5″ x 5½″ x 5½″ Finish—Baked Enamel

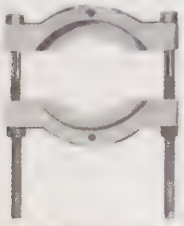
TOOLS WITH A PULL — Litchfield MAINTENANCE TOOLS — CHROME STEEL

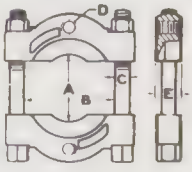
TWIN AND TRIPLE GRIP PULLERS

DIMENSIONS INCHES

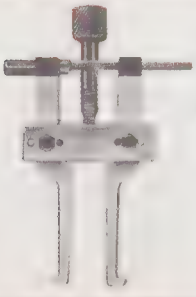
Approximate Cap. Tons	Maximum Reach	Maximum Spread	Puller Number		
			Twin Grip	Triple Grip	Combination
10	8½	13½	E6624	—	—
10	7	13	E6625	—	—
5	5½	10	E6628A	E6628B	E6628C
10	10	12	E6631A	E6631B	E6631C
15	12½	14	E6632A	E6632B	E6632C
20	15½	16	E6633A	E6633B	E6633C
15	12	12	E7731A	E7731B	E7731C
20	15¼	14	E7732A	E7732B	E7732C
25	19	18½	E7733A	E7733B	E7733C
25	26	24½	E7734A	E7734B	E7734C

SHEAVE PULLERS

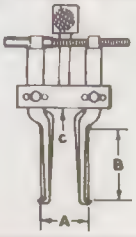




Pulling Component Number		E6670	E6671	E6672	E6673	E6674A	E6675	E6676	E6679	E6680
Maximum opening between plates	"A"	1⅞	2⅜	2	4	5¼	8½	10⅛	6	10
Distance between bolts	"B"	2⅝	2⅝	2⅝	4⅜	5⅞	8	10	6	10
Bolts diameter	"C"	7/16	7/16	7/16	⅝	¾	⅞	1⅛	¾	⅞
Attaching holes tapped	"D"	⅜-16	⅜-16	⅜-16	⅝-18	⅝-18	⅝-18 1-14	⅝-18	⅝-18	⅝-18
Thickness	"E"	11/16	11/16	11/16	1	1¼	1½	2	1¼	1 5/16

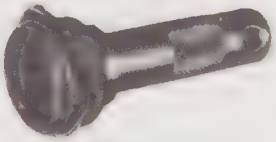


E6658 E6659 BEARING PULLER HEADS

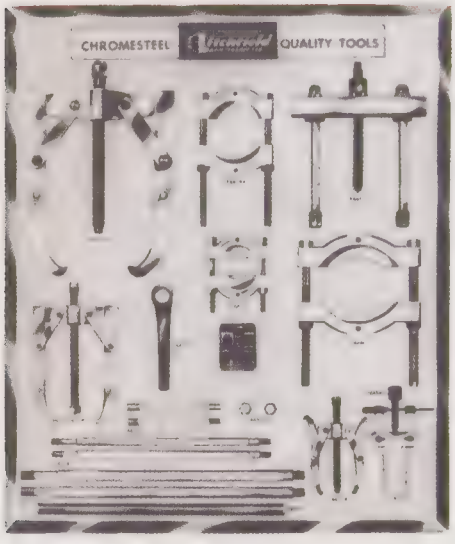


Puller No.	"A" Max.	"A" Min.	"B"	"C" Tapped Hole
E6659	6	1½	4	⅝-18
E6658	9	3	6	1-14

SUPER STUD EXTRACTOR — DRIVER



E601—5/16 to 7/16 E602—7/16 to 9/16
E603—⅝ to ¾ E604—⅝ to ⅞ E605—⅞ to 1⅛



E6666 SLIDE HAMMER PULLER SET

PULLER SETS

Description	Tools Only	Tools Supplied With Display Board	Tools in Metal Carrying Case
Junior Automatic	E501	E501A	E501B
Senior Automatic	E505	E505A	E505B
Junior Tractor	E515	E515A	E515B
Senior Tractor	E520	E520A	E520B
Light Duty Industrial	E810	E810A	E810B
Medium Duty Industrial	E815	E815A	E815B
Combination	E530	E530A	—
Extra Heavy Duty Combination	E525	E525A	—

TAPER SHANK TWIST DRILLS

L1284 Silver Jet or Black Jet High Speed Steel

DIMENSIONS INCHES

Drill Size	Length of Flute	Length Overall	M.T.S.	Drill Size	Length of Flute	Length Overall	M.T.S.	Drill Size	Length of Flute	Length Overall	M.T.S.	Drill Size	Length of Flute	Length Overall	M.T.S.
1/64	3/8	4 1/8	1	7/8	6 1/8	10 3/4	3	1 27/64	9 7/8	16 7/8	5	2 3/32	10 1/8	17 3/8	5
1/16	7/8	4 1/2	1	57/64	6 1/8	10	2	1 1/2	9 7/8	15 1/2	4	2 1/16	10 1/8	17 3/8	5
1/64	1	4 3/8	1	29/32	6 1/8	10 3/4	3	1 1/2	9 7/8	16 7/8	5	2 1/8	10 1/8	17 3/8	5
3/32	1 1/2	4 3/8	1	59/64	6 1/8	10	2	1 23/64	10	15 3/8	4	2 3/16	10 1/8	17 3/8	5
7/64	1 1/2	5	1	15/16	6 1/8	10 3/4	3	1 23/64	10	17	5	2 1/8	10 1/8	17 3/8	5
1/8	1 7/8	5 1/8	1	61/64	6 1/8	10 3/4	3	1 1/8	10	15 3/8	4	2 7/16	11 1/2	18 1/2	5
9/64	2 1/4	5 1/8	1	31/32	6 1/8	10 3/4	3	1 1/8	10	17	5	2 1/8	11 1/2	18 1/2	5
5/32	2 1/8	5 3/8	1	63/64	6 3/8	11	3	1 41/64	10 1/8	15 1/2	4	2 1/4	11 1/2	18 1/2	5
11/64	2 1/4	5 1/2	1	1	6 3/8	11	3	1 21/32	10 1/8	17 1/8	5	2 17/32	11 1/2	18 1/2	5
3/16	2 1/4	5 1/2	1	1 1/64	6 3/8	11	3	1 1/4	10 1/8	15 1/2	4	2 9/16	11 7/8	19 1/2	5
13/64	2 3/8	6	1	1 1/32	6 1/2	11 1/8	3	1 43/64	10 1/8	17 1/8	5	2 1/2	11 7/8	19 1/2	5
7/32	2 3/8	6	1	1 3/64	6 1/2	11 1/8	3	1 11/16	10 1/8	15 1/2	4	2 5/8	11 7/8	19 1/2	5
15/64	2 3/8	6 1/8	1	1 1/16	6 1/2	11 1/8	3	1 45/64	10 1/8	17 1/8	5	2 21/32	11 7/8	19 1/2	5
1/4	2 3/8	6 1/8	1	1 5/64	6 5/8	11 1/4	3	1 23/32	10 1/8	15 1/2	4	2 11/16	12 3/8	20 3/8	5
17/64	3	6 1/2	1	1 1/32	6 5/8	11 1/4	3	1 47/64	10 1/8	17 1/8	5	2 43/64	12 3/8	20 3/8	5
9/32	3	6 1/2	1	1 7/64	6 5/8	11 1/2	3	1 3/4	10 1/8	15 1/2	4	2 3/4	12 3/8	20 3/8	5
19/64	3 1/8	6 3/8	1	1 1/8	7 3/8	12 1/2	4	1 49/64	10 1/8	17 1/8	5	2 45/64	12 3/8	20 3/8	5
5/16	3 1/8	6 3/8	1	1 9/64	6 5/8	11 1/2	3	1 25/32	10 1/8	15 1/2	4	2 23/32	13 3/8	21 1/8	5
21/64	3 1/2	6 1/2	1	1 5/32	6 7/8	12 1/2	4	1 51/64	10 1/8	17 1/8	5	2 47/64	13 3/8	21 1/8	5
11/32	3 1/2	6 1/2	1	1 11/64	7 1/8	11 3/8	3	1 13/16	10 3/8	16 1/2	4	2 3/4	13 3/8	21 1/8	5
23/64	3 1/2	6 3/4	1	1 1/16	7 1/8	12 3/8	4	1 53/64	10 1/8	17 1/8	5	2 49/64	13 3/8	21 1/8	5
3/8	3 1/2	6 3/4	1	1 1/8	7 1/8	11 3/8	3	1 7/8	10 3/8	16 1/2	4	2 13/16	14	21 3/8	5
25/64	3 3/8	7	1	1 1/8	7 1/8	12 3/8	4	1 3/4	10 1/8	17 1/8	5	2 51/64	14	21 3/8	5
13/32	3 3/8	7	1	1 13/64	7 1/4	11 3/8	3	1 55/64	10 3/8	16 1/2	4	3	14	21 3/8	5
27/64	3 5/8	7 1/4	1	1 7/32	7 1/4	12 3/8	4	1 55/64	10 1/8	17 1/8	5	3 1/32	14 3/8	24 1/2	6
7/16	3 7/8	7 1/2	1	1 15/64	7 1/4	11 3/8	3	1 59/64	10 3/8	16 1/2	4	3 1/16	14 1/2	22	5
29/64	4 1/8	7 1/2	1	1 1/4	7 1/4	12 3/8	4	1 59/64	10 1/8	17 1/8	5	3 1/16	14 3/8	24 1/2	6
15/32	4 1/8	7 1/2	1	1 17/64	7 3/8	12	3	1 29/32	10 3/8	16 1/2	4	3 3/32	14 1/2	22	5
31/64	4 1/8	7 3/4	1	1 9/32	7 3/8	13	4	1 29/32	10 1/8	17 1/8	5	3 3/32	14 3/8	24 1/2	6
1/2	4 1/8	8	2	1 19/64	7 3/8	12	3	1 15/16	10 3/8	16 1/2	4	3 1/8	14 1/2	22	5
1/2	4 1/8	8 1/4	1	1 5/16	7 3/8	13	4	1 15/16	10 1/8	17 1/8	5	3 1/8	14 3/8	24 1/2	6
33/64	4 1/8	8 1/4	2	1 21/64	7 1/2	12 1/8	3	1 31/64	10 3/8	16 1/2	4	3 5/32	14 1/2	22	5
17/32	4 1/8	8	1	1 11/32	7 1/2	13 1/8	4	1 31/64	10 1/8	17 1/8	5	3 5/32	14 3/8	24 1/2	6
33/64	4 1/8	8 1/4	2	1 23/64	7 1/2	12 1/8	3	1 1/32	10 3/8	16 1/2	4	3 3/16	14 1/2	22	5
17/32	4 1/8	8	1	1 3/8	7 1/2	13 1/8	4	1 1/32	10 1/8	17 1/8	5	3 3/16	14 3/8	24 1/2	6
35/64	4 1/8	8 1/4	2	1 25/64	7 5/8	12 1/2	3	1 33/64	10 3/8	16 1/2	4	3 7/32	14 1/2	22	5
9/16	4 1/8	8 1/4	1	1 13/32	7 5/8	13 1/2	4	1 33/64	10 1/8	17 1/8	5	3 7/32	14 3/8	24 1/2	6
37/64	4 1/8	8 1/4	2	1 1/4	7 5/8	12 1/2	3	1 1/16	10 1/2	16 1/2	4	3 1/4	15 1/2	23	5
19/32	4 1/8	8 1/4	2	1 1/4	7 5/8	13 1/2	4	1 1/16	10 3/8	17 3/8	5	3 1/4	15 1/2	25 1/2	6
39/64	4 1/8	8 1/4	2	1 17/64	8 1/2	14 1/8	4	1 35/64	10 1/2	16 1/2	4	3 9/32	15 1/2	23	5
5/8	4 1/8	8 1/4	2	1 9/32	8 1/2	14 1/8	4	1 35/64	10 3/8	17 3/8	5	3 9/32	15 1/2	25 1/2	6
41/64	4 1/8	8 1/4	2	1 19/64	8 5/8	14 1/4	4	1 9/16	10 1/2	16 1/2	4	3 5/16	15 1/2	23	5
21/32	4 1/8	8 1/4	2	1 5/16	8 5/8	14 1/2	4	1 9/16	10 3/8	17 3/8	5	3 5/16	15 1/2	25 1/2	6
43/64	5 1/8	9	2	1 21/64	8 1/2	14 3/8	4	1 37/64	10 1/2	16 1/2	4	3 11/32	15 1/2	23	5
11/16	5 1/8	9	2	1 11/32	8 1/2	14 3/8	4	1 37/64	10 3/8	17 3/8	5	3 11/32	15 1/2	25 1/2	6
45/64	5 3/8	9 1/4	2	1 23/64	8 5/8	14 1/2	4	1 19/32	10 3/8	16 5/8	4	3 3/8	15 1/2	23	5
23/32	5 3/8	9 1/2	2	1 3/8	8 5/8	14 1/2	4	1 19/32	10 3/8	17 3/8	5	3 3/8	15 1/2	25 1/2	6
47/64	5 3/8	9 1/2	2	1 25/64	9	14 5/8	4	1 39/64	10 3/8	16 5/8	4	3 13/32	15 1/2	23	5
3/4	5 3/8	9 1/2	2	1 13/32	9	14 5/8	4	1 39/64	10 3/8	17 3/8	5	3 13/32	15 1/2	25 1/2	6
49/64	5 7/8	9 3/4	2	1 27/64	9 1/8	14 3/4	4	1 5/8	10 3/8	16 5/8	4	3 7/16	15 1/2	23	5
25/32	5 7/8	9 3/4	2	1 7/16	9 1/8	14 3/4	4	1 41/64	10 3/8	17 3/8	5	3 7/16	15 1/2	25 1/2	6
51/64	6	9 7/8	2	1 29/64	9 1/4	14 7/8	4	1 41/64	10 3/8	16 5/8	4	3 15/32	15 1/2	23	5
13/16	6	9 7/8	2	1 15/32	9 1/4	14 7/8	4	1 21/32	10 3/8	17 3/8	5	3 15/32	15 1/2	25 1/2	6
53/64	6 1/8	10	2	1 31/64	9 3/8	15	4	2	10 3/8	16 5/8	4	3 1/2	16 1/2	24	5
27/32	6 1/8	10 3/4	3	1 1/2	9 3/8	15	4	2	10 3/8	17 3/8	5	3 1/2	16 3/8	26 1/2	6
55/64	6 1/8	10	2	1 33/64	9 3/8	15	4	2 1/64	10 3/8	17 3/8	5	3 9/16	16 3/8	26 1/2	6
7/8	6 1/8	10 3/4	3	1 33/64	9 3/8	16 3/8	5	2 1/32	10 3/8	17 3/8	5	3 5/8	16 3/8	26 1/2	6
57/64	6 1/8	10	2	1 17/32	9 3/8	15	4	2 1/16	10 1/2	17 3/8	5	3 11/16	16 3/8	26 1/2	6
29/32	6 1/8	10 3/4	3	1 17/32	9 3/8	16 3/8	5	2 3/32	10 1/2	17 3/8	5	3 3/4	16 3/8	26 1/2	6
59/64	6 1/8	10	2	1 35/64	9 3/8	15 1/2	4	2 1/8	10 1/2	17 3/8	5	3 13/16	16 3/8	26 1/2	6
15/16	6 1/8	10 3/4	3	1 35/64	9 3/8	16 3/8	5	2 5/32	10 1/2	17 3/8	5	3 7/8	16 3/8	26 1/2	6
61/64	6 1/8	10	2	1 9/16	9 3/8	15 1/2	4	2 3/16	10 1/2	17 3/8	5	3 15/16	16 3/8	26 1/2	6
31/32	6 1/8	10 3/4	3	1 37/64	9 3/8	16 3/8	5	2 7/32	10 1/2	17 3/8	5	4	16 3/8	26 1/2	6
63/64	6 1/8	10	2	1 37/64	9 3/8	15 1/2	4	2 1/4	10 1/2	17 3/8	5				

Note: The drill point is additional to the O.A. and flute lengths shown.

TAPER SHANK TWIST DRILLS

L1285 Silver Jet or Black Jet High Speed Steel — **FLUTES LONGER THAN STANDARD**

DIMENSIONS INCHES

NUMBER OF MORSE TAPER

Drill Size	No. 1 Flute Lengths (inches)			No. 2 Flute Lengths (inches)		No. 3 Flute Lengths	No. 4 Flute Lengths
3/16	6	8	12	—	—	—	—
1/4	6	8	12	—	—	—	—
5/16	6	8	12	—	—	—	—
3/8	6	8	—	—	12	—	—
7/16	6	8	—	—	12	—	—
1/2	6	8	—	—	12	—	—
9/16	—	—	—	8	12	—	—
5/8	—	—	—	8	12	—	—
11/16	—	—	—	8	12	—	—
3/4	—	—	—	8	12	—	—
13/16	—	—	—	—	12	—	—
7/8	—	—	—	—	12	—	—
15/16	—	—	—	—	—	12	—
1	—	—	—	—	—	12	—
1 1/16	—	—	—	—	—	12	—
1 1/8	—	—	—	—	—	12	—
1 3/16	—	—	—	—	—	12	—
1 1/4	—	—	—	—	—	12	—
1 5/16	—	—	—	—	—	—	12
1 3/8	—	—	—	—	—	—	12
1 7/16	—	—	—	—	—	—	12
1 1/2	—	—	—	—	—	—	12
1 5/8	—	—	—	—	—	—	12
1 11/16	—	—	—	—	—	—	12
1 3/4	—	—	—	—	—	—	12
1 13/16	—	—	—	—	—	—	12
1 7/8	—	—	—	—	—	—	12
2	—	—	—	—	—	—	12

Intermediate sizes not listed also available

TAPER SHANK CORE DRILLS

L1287 Silver Jet or Black Jet High Speed Steel — **3 OR 4 FLUTES**

DIMENSIONS INCHES

Drill Size	Morse Taper Shank	Drill Size	Morse Taper Shank
3/16	1	1 1/8	3
1/4	1	1 3/16	3
5/16	1	1 1/4	3
3/8	1	1 5/16	4
7/16	1	1 3/8	4
1/2	1	1 7/16	4
9/16	2	1 1/2	4
5/8	2	1 9/16	4
11/16	2	1 5/8	4
3/4	2	1 11/16	4
13/16	2	1 3/4	4
7/8	2	1 13/16	4
15/16	3	1 7/8	4
1	3	1 15/16	4
1 1/16	3	2	4

Intermediate sizes not listed also available.

Flute length and overall length same as standard 2 flute Taper Shank Drills.

STRAIGHT SHANK JOBBER TWIST DRILLS

L1286 Silver Jet or Black Jet High Speed Steel Right or Left Hand Cutting — **WIRE GAUGE**

DIMENSIONS INCHES

No. of Gauge	Dec. Equiv.	Legnth of Flute	Length Overall	No. of Gauge	Dec. Equiv.	Length of Flute	Length Overall
1	0.2280	2 3/8	3 7/8	41	0.0960	1 3/4	2 3/8
2	0.2210	2 3/8	3 7/8	42	0.0935	1 3/4	2 3/8
3	0.2130	2 3/8	3 7/8	43	0.0890	1 3/4	2 3/8
4	0.2090	2 3/8	3 7/8	44	0.0860	1 3/4	2 3/8
5	0.2055	2 3/8	3 7/8	45	0.0820	1 3/4	2 3/8
6	0.2040	2 3/8	3 7/8	46	0.0810	1 3/4	2 3/8
7	0.2010	2 7/16	3 7/8	47	0.0785	1	2
8	0.1990	2 7/16	3 7/8	48	0.0760	1	2
9	0.1960	2 7/16	3 7/8	49	0.0730	1	2
10	0.1935	2 7/16	3 7/8	50	0.0700	1	2
11	0.1910	2 7/16	3 7/8	51	0.0670	1	2
12	0.1890	2 7/16	3 7/8	52	0.0635	7/8	1 7/8
13	0.1850	2 7/16	3 7/8	53	0.0595	7/8	1 7/8
14	0.1820	2 7/16	3 7/8	54	0.0550	7/8	1 7/8
15	0.1800	2 7/16	3 7/8	55	0.0520	7/8	1 7/8
16	0.1770	2 7/16	3 7/8	56	0.0465	3/4	1 3/4
17	0.1730	2 7/16	3 7/8	57	0.0430	3/4	1 3/4
18	0.1695	2 1/8	3 1/4	58	0.0420	11/16	1 5/8
19	0.1660	2 1/8	3 1/4	59	0.0410	11/16	1 5/8
20	0.1610	2 1/8	3 1/4	60	0.0400	11/16	1 5/8
21	0.1590	2 1/8	3 1/4	61	0.0390	11/16	1 5/8
22	0.1570	2	3 1/8	62	0.0380	5/8	1 1/2
23	0.1540	2	3 1/8	63	0.0370	5/8	1 1/2
24	0.1520	2	3 1/8	64	0.0360	5/8	1 1/2
25	0.1495	1 7/8	3	65	0.0350	5/8	1 1/2
26	0.1470	1 7/8	3	66	0.0330	1/2	1 3/8
27	0.1440	1 7/8	3	67	0.0320	1/2	1 3/8
28	0.1405	1 3/4	2 7/8	68	0.0310	1/2	1 3/8
29	0.1360	1 3/4	2 7/8	69	0.0292	1/2	1 3/8
30	0.1285	1 3/4	2 3/4	70	0.0280	1/2	1 1/4
31	0.1200	1 3/4	2 3/4	71	0.0260	3/8	1 1/4
32	0.1160	1 3/4	2 3/4	72	0.0250	7/16	1 1/8
33	0.1130	1 1/2	2 5/8	73	0.0240	7/16	1 1/8
34	0.1110	1 1/2	2 5/8	74	0.0225	1/4	1
35	0.1100	1 1/2	2 5/8	75	0.0210	1/4	1
36	0.1065	1 7/16	2 1/2	76	0.0200	7/16	7/8
37	0.1040	1 7/16	2 1/2	77	0.0180	7/16	7/8
38	0.1015	1 7/16	2 1/2	78	0.0160	7/16	7/8
39	0.0995	1 1/4	2 3/8	79	0.0145	7/16	3/4
40	0.0980	1 1/4	2 3/8	80	0.0135	7/16	3/4

Note: The drill point is additional to the O.A. and flute lengths shown.

STRAIGHT SHANK JOBBER TWIST DRILLS

L1288 Silver Jet or Black Jet High Speed Steel Right or Left Hand Cutting — **LETTER GAUGE**

DIMENSIONS INCHES

Letter Gauge	Dec. Equiv.	Length of Flute	Length Overall	Letter Gauge	Dec. Equiv.	Length of Flute	Length Overall
A	0.2340	2 3/8	3 7/8	N	0.3020	3 7/16	4 3/8
B	0.2380	2 3/8	4	O	0.3160	3 7/16	4 1/2
C	0.2420	2 3/8	4	P	0.3230	3 7/16	4 3/8
D	0.2460	2 3/8	4	Q	0.3320	3 7/16	4 3/8
E	0.2500	2 3/8	4	R	0.3390	3 7/16	4 3/8
F	0.2570	2 3/8	4 1/8	S	0.3480	3 1/2	4 7/8
G	0.2610	2 3/8	4 1/8	T	0.3580	3 1/2	4 7/8
H	0.2660	2 3/8	4 1/8	U	0.3680	3 5/8	5
I	0.2720	2 3/8	4 1/8	V	0.3770	3 5/8	5
J	0.2770	2 3/8	4 1/8	W	0.3860	3 3/4	5 1/8
K	0.2810	2 11/16	4 1/2	X	0.3970	3 3/4	5 1/8
L	0.2900	2 11/16	4 1/2	Y	0.4040	3 7/8	5 1/4
M	0.2950	3 1/16	4 3/8	Z	0.4130	3 7/8	5 1/4

Note: The drill point is additional to the O.A. and flute lengths shown.

STRAIGHT SHANK JOBBER TWIST DRILLS

STANDARD METRIC SIZES

L1289 Silver Jet or Black Jet
High Speed Steel Right Hand Cutting

DIMENSIONS INCHES

Diam. M/M	Dec. Equiv.	Length of Flute	Length Overall	Diam. M/M	Dec. Equiv.	Length of Flute	Length Overall	Diam. M/M	Dec. Equiv.	Length of Flute	Length Overall	Diam. M/M	Dec. Equiv.	Length of Flute	Length Overall
0.32	0.0126	3/16	3/4	1.75	0.0689	1	2	4.70	0.1850	2 7/16	3 1/2	4.90	0.1929	2 7/16	3 3/8
0.35	0.0138	3/16	3/4	1.80	0.0709	1	2	4.80	0.1890	2 7/16	3 1/2	5.00	0.1969	2 7/16	3 3/8
0.38	0.0150	3/16	3/4	1.85	0.0729	1	2	5.10	0.2008	2 7/16	3 3/8	9.10	0.3583	3 1/2	4 5/8
0.40	0.0157	3/16	3/4	1.90	0.0748	1	2	5.20	0.2047	2 1/2	3 3/4	9.20	0.3622	3 3/8	5
0.42	0.0165	3/16	7/8	1.95	0.0768	1	2	5.30	0.2087	2 1/2	3 3/4	9.30	0.3661	3 3/8	5
0.45	0.0177	3/16	7/8	2.00	0.0787	1 1/8	2 1/8	5.40	0.2126	2 1/2	3 3/4	9.40	0.3701	3 3/8	5
0.48	0.0189	3/16	7/8	2.05	0.0807	1 1/8	2 1/8	5.50	0.2165	2 1/2	3 3/4	9.50	0.3740	3 3/8	5
0.50	0.0197	3/16	7/8	2.10	0.0827	1 1/8	2 1/8	5.60	0.2205	2 5/8	3 7/8	9.60	0.3780	3 3/4	5 1/8
0.52	0.0205	3/16	7/8	2.15	0.0847	1 1/8	2 1/8	5.70	0.2244	2 5/8	3 7/8	9.70	0.3819	3 3/4	5 1/8
0.55	0.0217	1/4	1	2.20	0.0866	1 1/4	2 1/4	5.80	0.2283	2 5/8	3 7/8	9.80	0.3858	3 3/4	5 1/4
0.58	0.0228	1/4	1	2.25	0.0886	1 1/4	2 1/4	5.90	0.2323	2 5/8	3 7/8	9.90	0.3898	3 3/4	5 1/8
0.60	0.0236	1/4	1	2.30	0.0906	1 1/4	2 1/4	6.00	0.2362	2 3/4	4	10.00	0.3937	3 7/8	5 1/4
0.62	0.0244	3/16	1 1/8	2.35	0.0926	1 1/4	2 1/4	6.10	0.2402	2 3/4	4	10.10	0.3976	3 7/8	5 1/4
0.65	0.0256	3/16	1 1/8	2.40	0.0945	1 3/8	2 3/8	6.20	0.2441	2 3/4	4	10.20	0.4016	3 7/8	5 1/4
0.68	0.0268	1/4	1 1/4	2.45	0.0965	1 3/8	2 3/8	6.30	0.2480	2 3/4	4	10.30	0.4055	3 7/8	5 1/4
0.70	0.0276	1/4	1 1/4	2.50	0.0984	1 3/8	2 3/8	6.40	0.2520	2 7/8	4 1/8	10.40	0.4094	3 7/8	5 1/4
0.72	0.0283	1/4	1 1/4	2.55	0.1004	1 7/16	2 1/2	6.50	0.2559	2 7/8	4 1/8	10.50	0.4134	3 7/8	5 1/4
0.75	0.0295	1/4	1 3/8	2.60	0.1024	1 7/16	2 1/2	6.60	0.2598	2 7/8	4 1/8	10.60	0.4173	3 15/16	5 3/8
0.78	0.0307	1/4	1 3/8	2.65	0.1054	1 7/16	2 1/2	6.70	0.2638	2 7/8	4 1/8	10.70	0.4213	3 15/16	5 3/8
0.80	0.0315	1/4	1 3/8	2.70	0.1063	1 7/16	2 1/2	6.80	0.2677	2 7/8	4 1/8	10.80	0.4252	4 1/16	5 1/2
0.82	0.0323	1/4	1 3/8	2.75	0.1083	1 1/2	2 5/8	6.90	0.2717	2 7/8	4 1/8	10.90	0.4291	4 1/16	5 1/2
0.85	0.0335	1/4	1 3/8	2.80	0.1102	1 1/2	2 5/8	7.00	0.2756	2 7/8	4 1/8	11.00	0.4331	4 1/16	5 1/2
0.88	0.0346	1/4	1 3/8	2.85	0.1122	1 1/2	2 5/8	7.10	0.2795	2 13/16	4 1/4	11.10	0.4370	4 1/16	5 1/2
0.90	0.0354	1/4	1 1/2	2.90	0.1142	1 5/8	2 3/4	7.20	0.2835	2 13/16	4 1/4	11.20	0.4409	4 1/16	5 5/8
0.92	0.0362	1/4	1 1/2	2.95	0.1162	1 5/8	2 3/4	7.30	0.2874	2 13/16	4 1/4	11.30	0.4449	4 1/16	5 5/8
0.95	0.0374	1/4	1 1/2	3.00	0.1181	1 5/8	2 3/4	7.40	0.2913	3 1/16	4 3/8	11.40	0.4488	4 7/16	5 5/8
0.98	0.0386	1/4	1 1/2	3.10	0.1220	1 5/8	2 3/4	7.50	0.2953	3 1/16	4 3/8	11.50	0.4528	4 7/16	5 5/8
1.00	0.0394	1/4	1 5/8	3.20	0.1260	1 5/8	2 3/4	7.60	0.2992	3 1/16	4 3/8	11.60	0.4567	4 7/16	5 3/4
1.05	0.0414	1/4	1 5/8	3.30	0.1299	1 5/8	2 3/4	7.70	0.3031	3 1/16	4 3/8	11.70	0.4606	4 7/16	5 3/4
1.10	0.0433	1/4	1 3/4	3.40	0.1339	1 3/4	2 7/8	7.80	0.3071	3 1/16	4 1/2	11.80	0.4646	4 5/8	5 3/4
1.15	0.0453	1/4	1 3/4	3.50	0.1378	1 3/4	2 7/8	7.90	0.3110	3 1/16	4 1/2	11.90	0.4685	4 5/8	5 3/4
1.20	0.0472	1/4	1 3/4	3.60	0.1417	1 7/8	3	8.00	0.3150	3 1/16	4 1/2	12.00	0.4724	4 3/8	5 7/8
1.25	0.0492	1/4	1 7/8	3.70	0.1457	1 7/8	3	8.10	0.3189	3 1/16	4 3/8	12.10	0.4764	4 3/8	5 7/8
1.30	0.0512	1/4	1 7/8	3.80	0.1496	1 7/8	3	8.20	0.3228	3 1/16	4 3/8	12.20	0.4803	4 3/8	5 7/8
1.35	0.0532	1/4	1 7/8	3.90	0.1535	2	3 1/8	8.30	0.3268	3 1/16	4 3/8	12.30	0.4843	4 3/8	5 7/8
1.40	0.0551	1/4	1 7/8	4.00	0.1575	2 1/8	3 1/8	8.40	0.3307	3 1/16	4 3/8	12.40	0.4882	4 1/2	6
1.45	0.0571	1/4	1 7/8	4.10	0.1614	2 1/8	3 1/8	8.50	0.3346	3 1/16	4 3/8	11.50	0.4921	4 1/2	6
1.50	0.0591	1/4	1 7/8	4.20	0.1654	2 1/8	3 1/4	8.60	0.3386	3 1/16	4 3/8	12.60	0.4961	4 1/2	6
1.55	0.0610	1/4	1 7/8	4.30	0.1693	2 1/8	3 1/4	8.70	0.3425	3 1/16	4 3/8	12.70	0.5000	4 1/2	6
1.60	0.0630	1/4	1 7/8	4.40	0.1732	2 3/16	3 3/8	8.80	0.3465	3 1/2	4 7/8	12.80	0.5039	4 1/2	6
1.65	0.0650	1	2	4.50	0.1772	2 3/16	3 3/8	8.90	0.3504	3 1/2	4 7/8	12.90	0.5079	4 1/2	6
1.70	0.0669	1	2	4.60	0.1811	2 3/16	3 3/8	9.00	0.3543	3 1/2	4 7/8	13.00	0.5118	4 1/2	6

Note: The drill point is additional to the O.A. and flute lengths shown. Left Hand Cutting — On application.

"STUB" DRILLS STRAIGHT SHANK

WIRE GAUGE SIZES

L1290 Silver Jet or Black Jet
Screw Machine Length
High Speed Steel Right Hand Cutting

DIMENSIONS INCHES

Drill Size	Dec. Equiv.	Length of Flute	Length Overall	Drill Size	Dec. Equiv.	Length of Flute	Length Overall	Drill Size	Dec. Equiv.	Length of Flute	Length Overall	Drill Size	Dec. Equiv.	Legnth of Flute	Length Overall
1	0.2280	1 5/16	2 7/16	16	0.1770	1 1/8	2 7/16	31	0.1200	7/8	1 7/8	46	0.0810	3/4	1 3/4
2	0.2210	1 5/16	2 7/16	17	0.1730	1 1/8	2 7/16	32	0.1160	7/8	1 7/8	47	0.0785	3/4	1 3/4
3	0.2130	1 1/4	2 3/8	18	0.1695	1 1/16	2 3/8	33	0.1130	7/8	1 7/8	48	0.0760	11/16	1 11/16
4	0.2090	1 1/4	2 3/8	19	0.1660	1 1/16	2 3/8	34	0.1110	7/8	1 7/8	49	0.0730	11/16	1 11/16
5	0.2055	1 1/4	2 3/8	20	0.1610	1 1/16	2 3/8	35	0.1100	7/8	1 7/8	50	0.0700	11/16	1 11/16
6	0.2040	1 1/4	2 3/8	21	0.1590	1 1/16	2 3/8	36	0.1065	13/16	1 13/16	51	0.0670	11/16	1 11/16
7	0.2010	1 3/16	2 1/4	22	0.1570	1 1/16	2 3/8	37	0.1040	13/16	1 13/16	52	0.0635	11/16	1 11/16
8	0.1990	1 3/16	2 1/4	23	0.1540	1	2 1/16	38	0.1015	13/16	1 13/16	53	0.0595	5/8	1 5/8
9	0.1960	1 3/16	2 1/4	24	0.1520	1	2 1/16	39	0.0995	13/16	1 13/16	54	0.0550	5/8	1 5/8
10	0.1935	1 3/16	2 1/4	25	0.1495	1	2 1/16	40	0.0980	13/16	1 13/16	55	0.0520	5/8	1 5/8
11	0.1910	1 3/16	2 1/4	26	0.1470	1	2 1/16	41	0.0960	13/16	1 13/16	56	0.0465	1/2	1 5/8
12	0.1890	1 3/16	2 1/4	27	0.1440	1	2 1/16	42	0.0935	3/4	1 3/4	57	0.0430	1/2	1 5/8
13	0.1850	1 1/8	2 1/16	28	0.1405	1 1/16	1 13/16	43	0.0890	3/4	1 3/4	58	0.0430	1/2	1 5/8
14	0.1820	1 1/8	2 1/16	29	0.1360	1 1/16	1 13/16	44	0.0860	3/4	1 3/4	59	0.0410	1/2	1 5/8
15	0.1800	1 1/8	2 1/16	30	0.1285	1 1/16	1 13/16	45	0.0820	3/4	1 3/4	60	0.0400	1/2	1 5/8

Note: The drill point is additional to the O.A. and flute lengths shown.

STRAIGHT SHANK JOBBER TWIST DRILLS

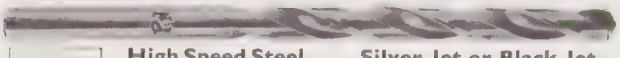
L1291 Silver Jet or Black Jet High Speed Steel Right or Left Hand Cutting — FRACTIONAL SIZES

DIMENSIONS INCHES

Drill Size	Dec. Equiv.	Length of Flute	Length Overall	Drill Size	Dec. Equiv.	Length of Flute	Length Overall
1/64	0.0156	3/16	3/4	23/64	0.3594	3 1/2	4 7/8
1/32	0.0312	1/2	1 1/8	3/8	0.3750	3 3/8	5
3/64	0.0469	3/4	1 1/4	25/64	0.3906	3 3/4	5 1/8
1/16	0.0625	7/8	1 3/8	13/32	0.4062	3 7/8	5 1/4
5/64	0.0781	1	2	27/64	0.4219	3 15/16	5 3/8
3/32	0.0937	1 1/4	2 1/4	7/16	0.4375	4 1/16	5 1/2
7/64	0.1094	1 1/2	2 3/8	29/64	0.4531	4 1/16	5 3/8
1/8	0.1250	1 5/8	2 3/4	15/32	0.4687	4 5/16	5 3/4
9/64	0.1406	1 3/4	2 7/8	31/64	0.4843	4 3/8	5 7/8
5/32	0.1562	2	3 1/8	1/2	0.5000	4 1/2	6
11/64	0.1719	2 1/8	3 1/4	33/64	0.5156	4 1/2	6 1/8
3/16	0.1875	2 5/16	3 1/2	17/32	0.5312	4 1/2	6 1/8
13/64	0.2031	2 7/16	3 5/8	35/64	0.5469	4 1/2	6 1/8
7/32	0.2187	2 1/2	3 3/4	9/16	0.5625	4 1/2	6 1/8
15/64	0.2344	2 5/8	3 7/8	37/64	0.5781	4 1/2	6 1/8
1/4	0.2500	3 1/4	4	19/32	0.5938	5 1/16	7 1/8
17/64	0.2656	2 7/8	4 1/8	39/64	0.6094	5 1/16	7 1/8
9/32	0.2812	2 15/16	4 1/4	5/8	0.6250	5 1/16	7 1/8
19/64	0.2969	3 1/16	4 3/8	41/64	0.6406	5 1/16	7 1/8
5/16	0.3125	3 3/16	4 1/2	21/32	0.6562	5 1/16	7 1/8
21/64	0.3281	3 5/16	4 5/8	43/64	0.6719	5 1/8	7 1/8
11/32	0.3437	3 7/16	4 3/4	11/16	0.6875	5 1/8	7 1/8

Note: The drill point is additional to the O.A. and flute lengths shown. High and Low Helix Straight Shank Jobber Twist Drills from 1/32" to 1/2" diameter and from No. 1-75 Wire Gauge also available ex stock.

STRAIGHT SHANK TWIST DRILLS — LONG SERIES



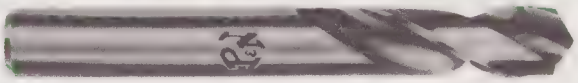
L1293 High Speed Steel — Silver Jet or Black Jet

DIMENSIONS INCHES

Drill Size	Dec. Equiv.	Length of Flute	Length Overall	Drill Size	Dec. Eluiv.	Length of Flute	Length Overall
3/64	0.0469	1 1/4	3	33/64	0.5156	4 1/2	8
1/16	0.0625	1 1/2	3 3/8	17/32	0.5312	4 1/2	8
5/64	0.0781	1 7/8	4	35/64	0.5469	4 7/8	8 1/4
3/32	0.0937	2 1/4	4 3/8	9/16	0.5625	4 7/8	8 1/4
7/64	0.1094	2 1/4	4 3/8	37/64	0.5781	4 7/8	8 3/4
1/8	0.1250	2 3/4	5 1/8	19/32	0.5938	4 7/8	8 3/4
9/64	0.1406	3	5 3/8	39/64	0.6094	4 7/8	8 3/4
5/32	0.1562	3	5 3/8	5/8	0.6250	4 7/8	8 3/4
11/64	0.1719	3 3/8	5 3/4	41/64	0.6406	5 1/8	9
3/16	0.1875	3 3/8	5 3/4	21/32	0.6562	5 1/8	9
13/64	0.2031	3 3/8	6	43/64	0.6719	5 1/8	9 1/4
7/32	0.2187	3 3/8	6	11/16	0.6875	5 3/8	9 1/4
15/64	0.2344	3 3/4	6 1/8	45/64	0.7031	5 5/8	9 1/2
1/4	0.2500	3 3/4	6 1/8	23/32	0.7188	5 5/8	9 1/2
17/64	0.2656	3 7/8	6 1/4	47/64	0.7344	5 7/8	9 3/4
9/32	0.2812	3 7/8	6 1/4	3/4	0.7500	5 7/8	9 3/4
19/64	0.2969	4	6 3/8	49/64	0.7656	6	9 7/8
5/16	0.3125	4	6 3/8	25/32	0.7812	6	9 7/8
21/64	0.3281	4 1/8	6 1/2	51/64	0.7969	6 1/8	10
11/32	0.3437	4 1/8	6 1/2	13/16	0.8125	6 1/8	10
23/64	0.3594	4 1/2	6 3/4	53/64	0.8281	6 1/8	10
3/8	0.3750	4 1/2	6 3/4	27/32	0.8438	6 1/8	10
25/64	0.3906	4 3/8	7	55/64	0.8594	6 1/8	10
13/32	0.4062	4 3/8	7	7/8	0.8750	6 1/8	10
27/64	0.4219	4 3/8	7 1/4	57/64	0.8906	6 1/8	10
7/16	0.4375	4 3/8	7 1/4	29/32	0.9062	6 1/8	10
29/64	0.4531	4 3/4	7 1/2	59/64	0.9219	6 1/8	10 3/4
15/32	0.4687	4 3/4	7 1/2	15/16	0.9375	6 1/8	10 3/4
31/64	0.4843	4 3/4	7 3/4	61/64	0.9531	6 3/8	11
1/2	0.5000	4 3/4	7 3/4	31/32	0.9687	6 3/8	11
				63/64	0.9844	6 3/8	11
				1	1.000	6 3/8	11

Note: The drill point is additional to the O.A. and flute lengths shown.

"STUB" DRILLS STRAIGHT SHANK



L1292 Silver Jet or Black Jet Screw Machine Length High Speed Steel Right Hand Cutting — FRACTIONAL SIZES

DIMENSIONS INCHES

Drill Size	Dec. Equiv.	Length of Flute	Length Overall	Drill Size	Dec. Equiv.	Legnth of Flute	Length Overall
1/32	0.0312	1/2	1 3/8	33/64	0.5156	2 3/8	3 7/8
3/64	0.0469	1/2	1 3/8	17/32	0.5312	2 3/8	3 7/8
1/16	0.0625	3/8	1 3/8	35/64	0.5469	2 1/2	4
5/64	0.0781	11/16	1 11/16	9/16	0.5625	2 1/2	4
3/32	0.0937	3/4	1 3/4	37/64	0.5781	2 3/8	4 1/8
7/64	0.1094	13/16	1 13/16	19/32	0.5938	2 3/8	4 1/8
1/8	0.1250	7/8	1 7/8	39/64	0.6094	2 3/4	4 1/4
9/64	0.1406	15/16	1 15/16	5/8	0.6250	2 3/4	4 1/4
5/32	0.1562	1	2 1/16	41/64	0.6406	2 7/8	4 1/2
11/64	0.1719	1 1/16	2 1/8	21/32	0.6562	2 7/8	4 1/2
3/16	0.1875	1 1/8	2 1/16	43/64	0.6719	2 7/8	4 3/8
13/64	0.2031	1 3/16	2 1/4	11/16	0.6875	2 7/8	4 3/8
7/32	0.2187	1 1/4	2 3/8	45/64	0.7031	3	4 3/4
15/64	0.2344	1 5/16	2 7/16	23/32	0.7188	3	4 3/4
1/4	0.2500	1 3/8	2 1/2	47/64	0.7344	3 1/8	5
17/64	0.2656	1 7/16	2 5/8	3/4	0.7500	3 1/8	5
9/32	0.2812	1 1/2	2 11/16	49/64	0.7656	3 1/2	5 1/8
19/64	0.2969	1 9/16	2 3/4	25/32	0.7812	3 1/2	5 1/8
5/16	0.3125	1 5/8	2 11/16	51/64	0.7969	3 3/8	5 1/4
21/64	0.3281	1 11/16	2 11/16	13/16	0.8125	3 3/8	5 1/4
11/32	0.3437	1 11/16	3	53/64	0.8281	3 1/2	5 3/8
23/64	0.3594	1 3/4	3 1/16	27/32	0.8438	3 1/2	5 3/8
3/8	0.3750	1 11/16	3 1/8	55/64	0.8594	3 1/2	5 1/2
25/64	0.3906	1 7/8	3 1/4	7/8	0.8750	3 1/2	5 1/2
13/32	0.4062	1 11/16	3 1/16	57/64	0.8906	3 3/8	5 3/8
27/64	0.4219	2	3 1/8	29/32	0.9062	3 3/8	5 3/8
7/16	0.4375	2 1/16	3 7/16	59/64	0.9219	3 3/4	5 3/4
29/64	0.4531	2 1/8	3 7/16	15/16	0.9375	3 3/4	5 3/4
15/32	0.4687	2 1/8	3 3/8	61/64	0.9531	3 1/2	5 3/8
31/64	0.4843	2 3/16	3 11/16	31/32	0.9688	3 7/8	5 7/8
1/2	0.5000	2 1/4	3 3/4	63/64	0.9844	4	6
				1	1.000	4	6

Note: The drill point is additional to the O.A. and flute lengths shown.

DOUBLE ENDED PANEL (STUB) DRILLS

L1294 Heavy Duty — .135 Split Point — Blackjet High Speed Steel

Drill Diameter	1/8	No. 30	No. 20	No. 11
Rivet Diameter	3 mm.	1/8	5/32	3/16
Length Overall	2	2	2	2

DESIGNED FOR USE WITH "POP" RIVETS

For complete specifications of "POP" Rivets, See Page 256

REDUCED SHANK DRILLS — High Speed Steel

L1295 SHANK ¼″ DIAMETER x 2½″ LONG
No Flat on Shank

DIMENSIONS INCHES

Drill Size	Length Overall	Length of Flute	Drill Size	Length Overall	Length of Flute
1/4	4 7/16	1 1/8	11/32	6	3 1/8
9/32	5 1/16	2	3/8	6	3 1/8
5/16	5 1/16	2 1/8	13/32	6	3 1/8
5/16	5 7/16	2 1/8	1	6	3 1/8
1/4	5 1/2	2 1/4	1 1/16	6	3 1/8
9/32	6	3	1 1/8	6	3 1/8
5/16	6	3 1/8	1 3/16	6	3 1/8
11/32	6	3 1/8	1 1/4	6	3 1/8
3/8	6	3 1/8	1 5/16	6	3 1/8
7/16	6	3 1/8	1 11/32	6	3 1/8
1/2	6	3 1/8	1 3/8	6	3 1/8
5/16	6	3 1/8	1 7/16	6	3 1/8
3/8	6	3 1/8	1 1/2	6	3 1/8
11/16	6	3 1/8			
3/4	6	3 1/8			

L1296 SHANK ⅜″ DIAMETER x 2¼″ LONG

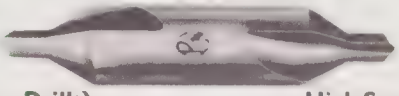
Diameter inches	Overall Length	Flute Length
7/16	6	3 3/8
1/2	6	3 3/8
9/16	6	3 3/8
5/8	6	3 3/8
3/4	6	3 3/8

L1297 SHANK ¼″ DIAMETER x ⅞″ LONG

Drill Size	Overall Length	Flute Length
1/4	3 7/8	2 3/4
5/16	4 3/8	3 1/8
3/8	4 7/8	3 5/8
7/16	5 3/8	4
1/2	5 7/8	4 1/2

COMBINED DRILLS AND COUNTERSINKS

L1300



(Centre Drills) — High Speed Steel

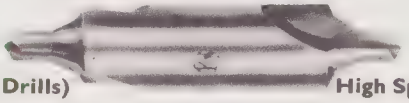
In accordance with British Standard Specification No. 328
Angle of countersink is 60° included. Spiral flutes.

DIMENSIONS INCHES

Size Designation	Body Dia.	Pilot Drill Dia.	Pilot Drill Length	Overall Length
1	1/8	3/64	1/16	1 1/2
2	3/16	1/16	5/64	1 3/4
3	1/4	3/32	1/8	2
4	5/16	1/8	5/32	2 1/4
5	7/16	3/16	1/4	2 1/2
6	5/8	1/4	7/16	3
7	3/4	5/16	13/32	3 1/2

BELL OR SAFETY TYPE COMBINED DRILLS AND COUNTERSINKS

L1301



(Centre Drills) — High Speed Steel

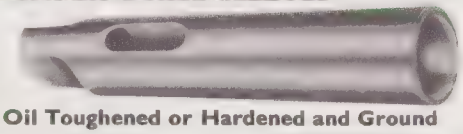
In accordance with British Standard Specification No. ASA B5.12
Included Angle of Countersinks is 60° and 120°. Spiral Flute
For drilling centres that will be protected against accidental damage.

DIMENSIONS INCHES

Size Designation	Body Dia.	Drill Dia.	Drill Length	Overall Length
11	1/8	3/64	3/64	1 1/4
12	3/16	1/16	1/16	1 7/8
13	1/4	3/32	3/32	2
14	5/16	7/64	7/64	2 1/8
15	7/16	5/32	5/32	2 3/4
16	1/2	3/16	3/16	3
17	5/8	7/32	7/32	3 1/4
18	3/4	1/4	1/4	3 1/2

COMBINED DRILLS AND COUNTERSINKS to both British and American Standards are supplied in all cutting sizes.
METRIC sizes and Left hand cutting drills are available.

MORSE TAPER DRILL SLEEVES



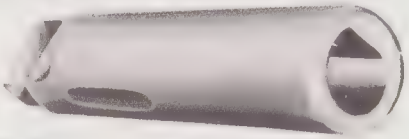
L1298 Oil Toughened or Hardened and Ground

Morse Taper Inside	1	2	3	4	5
Morse Taper Outside	2, 3, 4	3, 4, 5	4, 5, 6	5, 6	6

DRILL SLEEVES "USE-EM-UP" TYPE

L1299

For use on drills with broken tang.

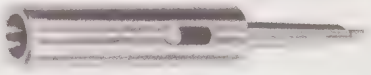


MORSE TAPER

Inside	1	2	3	4
Outside	2, 3, 4	3, 4	4, 5	5

DRILL SOCKET EXTENSIONS — Oil Toughened or Hardened and Ground

L1302



MORSE TAPER

Inside	1	2	3	4	5
Outside	1, 2, 3, 4, 5	1, 2, 3, 4	2, 3, 4, 5	3, 4, 5, 6	4, 5, 6

BLANK END SOCKETS

L1303

Made from High Carbon Steel, one end is left blank for machining.

MORSE TAPER INSIDE 1, 2, 3, 4 or 5

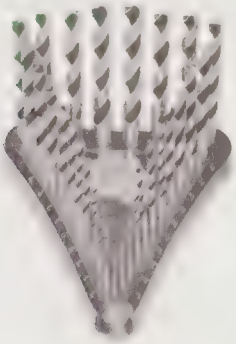
DRILL DRIFTS SUITABLE FOR MORSE TAPER

L1304

No. 0, No. 1 and 2, No. 3 and 4, No. 4 and 5

DRILL STANDS AND SETS

L1304 PLASTIC STANDS

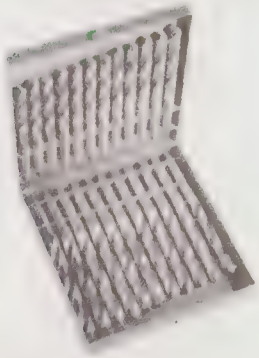


For
Number 1 to 60. Fractional 1/16" to 1/2" or
Combination Number and Fraction

L1307 DRILL SETS IN PLASTIC WALLETS

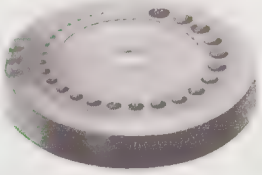
SET No. 27 — 1/16", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4". (7 sizes). H.S.S. Jobber Drills.
SET No. 28 — 1/16" to 1/4" x 1/64" rises. (13 sizes). H.S.S. Jobber Drills.

L1310 H.S.T.S. DRILL SETS IN METAL BOX



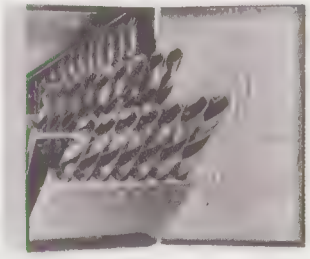
SET No. T.S.1— 1/4" to 33/64" x 1/64" rises. (20 sizes).
SET No. T.S.2—1/16" to 33/64" x 1/64" rises. (23 sizes).
SET No. T.S.3—33/64" to 1 1/2" x 1/64" rises. (23 sizes).

L1305 CIRCULAR DIE CAST STANDS



A. Number Drills 1 to 60.
B. Fractional Drills 1/16" to 1/2".
C. Letter Drills A to Z.

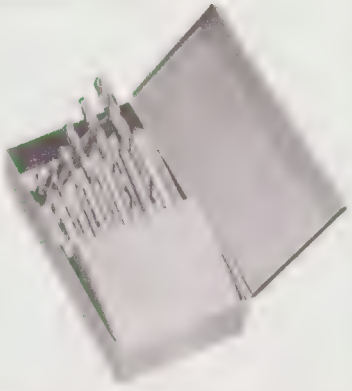
L1308 DRILL SETS IN METAL BOXES



H.S.S. JOBBER DRILLS

SET No. 1 13 Sizes 1/16" to 1/2" by 1/64" rises.
SET No. 2 21 Sizes 1/16" to 3/8" by 1/64" rises.
SET No. 3 29 Sizes 1/16" to 1/2" by 1/64" rises.
SET No. 3B 15 Sizes 1/16" to 1/2" by 1/32" rises.
SET No. 30 — Wire Gauge:— Range No's. 1-60 (60 sizes).

L1311 TAP AND DRILL SETS



SET No. 12 — 1/4", 5/32", 3/16", 1/4", 5/16" and 3/8" Whitworth Hand Taps (Second Lead) and H.S.S. Drills

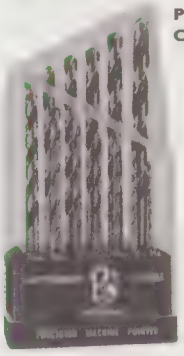
SET No. 13 — 3/16", 1/4", 5/16", 3/8", 7/16" and 1/2" Whitworth Hand Taps (Second Lead) and H.S.S. Drills.

SET No. 14 — 3/16", 1/4", 5/16", 3/8", 7/16" and 1/2" U.N.F. Hand Taps (Second Lead) and H.S.S. Drills.

SET No. 15 — 3/16", 1/4", 5/16", 3/8", 7/16" and 1/2" B.S.F. Hand Taps (Second Lead) and H.S.S. Drills.

SET No. 16 — 0-10 B.A. Hand Taps (Second Lead) and H.S.S. Drills.

L1306 JOBBERS DRILL SETS



PLASTIC BASE CLEAR PLASTIC

Set No. 4
13 Sizes
1/16" to 1/4" in 64ths.

SET No. 31 — H.S.S. Wire Gauge Jobber Drills:—Range No's. 61-80 (20 sizes).

L1309 DRILL SETS IN STRAWBOARD BOXES

SET No. 5 — H.S.S. Metal Working Drill Set:— Range 1/16"-1/4" x 1/64" rises, 1/4" shanks. (5 sizes) (complete with stand).

SET No. 7 — H.S.S. Jobber Drills (complete with stand):—Range 1/16"-1/2" x 1/64" rises. (29 sizes).

SET No. 8—H.S.S. Jobber Drills (without stand): — Range 1/16"-1/2" x 1/64" rises. (29 sizes).

SET No. 9 — H.S.S. Wire Gauge Jobber Drills (complete with stand):—Range numbers 1-60. (60 sizes).

SET No. 10 — H.S.S. Wire Gauge Jobber Drills (without stand):—Range numbers 1-60. (60 sizes).

SET No. 11 — H.S.S. Single Flute Machine Wood Drill Sets:—Range 1/16"-3/8" x 1/32" rises. (11 sizes) (complete with stand).

SET No. 11C — Carbon Steel Wood Machine Drills. 1/4"-1/2" x 1/16" rises with 1/4" diameter shanks. (5 sizes) (complete with stand).

SET No. 12C — Carbon Steel Dowelling Bits. 1/4"-1/2" x 1/16" rises with 1/4" diameter shanks. (5 sizes) (complete with stand).

SET No. 29 — Range A to Z. (26 sizes). H.S.S. Letter Size Jobber Drills (without stand).

L1312 SINGLE PACK

Sizes 1/16" to 1/2". (29 sizes). Available in Single Pack.

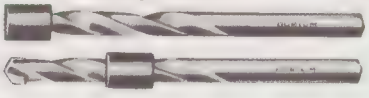
TUNGSTEN CARBIDE TIPPED MASONRY DRILLS

L1313 Tipped with Carboloy Cemented Carbide

STANDARD SIZE RANGE

Drill Size and Screw Plug No.	Shank Diam.	TYPE SF (Stand. Fixing-Devices) Overall length	TYPE SB (Single Brick) Overall length	TYPE DB (Double Brick) Overall length	IMPACT (Rotary Impact) Shank diam.	IMPACT (Rotary Impact) Overall length
5/32"-No. 6	3/16"	2 3/4"	—	—	—	—
3/16"-No. 8	11/64"	3 1/4"	7"	—	—	—
7/32"-No. 10	11/64"	3 1/4"	—	—	—	—
1/4"-No. 12	11/64"	3 1/4"	7"	13"	11/64"	7"
9/32"-No. 14	11/64"	3 1/4"	—	—	—	—
5/16"-No. 16	1/4"	4"	7"	13"	5/32"	7"
11/32"-No. 18	1/4"	4"	—	—	—	—
3/8"-No. 20	1/4"	4"	7"	13"	11/32"	7"
7/16"-No. 22	1/4"	5"	7"	13"	3/8"	7"
1/2"-No. 24	3/8"	5"	7"	13"	3/8"	7"
9/16"	3/8"	—	7"	—	3/8"	7"
5/8"-No. 26	3/8"	—	7"	13"	1/2"	7"
11/16"	1/2"	—	7"	—	1/2"	7"
3/4"-No. 28	1/2"	—	7"	13"	1/2"	7"
7/8"	1/2"	—	7"	13"	1/2"	7"
1" -No. 30	1/2"	—	7"	13"	1/2"	7"
1 1/8"	1/2"	—	7"	13"	—	—
1 1/4"	1/2"	—	7"	13"	—	—

L1314 DURIUM DRILLS for Rotary Machines



VIBROTO DRILLS for Percussion Machines

No. 6 (5/32")	No. 20 (3/8")	No. E (9/32")
No. 8 (7/32")	No. 22 (7/16")	No. 28 (3/4")
No. 10 (7/32")	No. C (11/64")	No. 7/8 (7/8")
No. 12 (1/4")	No. 24 (1/2")	No. G (1/4")
No. 14 (9/32")	No. D (11/32")	No. 30 (1")
No. 16 (5/16")	No. 26 (5/8")	
No. 18 (11/32")	No. 11/16 (11/16")	

L1315 LONG SERIES ONE PIECE 6" DRILLING LENGTH—

No. 12LS-(1/4") No. 14LS (9/32") No. 16LS (5/16") No. 18LS (11/32") No. 20LS (3/8")

L1316 LONG SERIES THREADED TO TAKE EXTENSION SLEEVE

No. 20LE (3/8")	No. 26LE (5/8")	No. 28LE (3/4")	No. 1 1/4LE (1 1/4")
No. 22LE (7/16")	11/16LE (11/16")	7/8LE (7/8")	No. 1 1/2LE (1 1/2")
No. 24LE (1/2")		No. 30LE (1")	No. 1 3/4LE (1 3/4")
			No. 1 3/4LE (1 3/4")
Type B Sleeve	Type C Sleeve	Type D Sleeve	Type E Sleeve

L1317 EXTENSION SLEEVES FOR ABOVE DRILLS—

Type B Type C Type D Type E

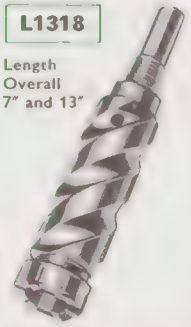
SCREW EXTRACTORS

L1319

Extractor Number	Outside Diam. of Screw	Pipe Size	Recommended Drill Size	Safe Torque lbs. ft.
1	3/32"-7/16"	1/8"	3/16"	12
2	7/32"-1/2"	—	7/16"	24
3	5/16"	1/4"	3/8"	54
4	1/2" -5/8"	—	7/32"	60
5	7/16"-3/4"	3/8"	11/64"	75
6	5/8"-1"	—	23/64"	105
7	1" -1 1/4"	1/2"	11/32"	—
8	1 1/8"-1 1/2"	3/4"	11/16"	—
9	1 3/4"-2 1/4"	1	1 1/16"	—
10	2 1/4"-2 1/2"	1 1/4"	1 5/16"	—
11	2 1/2"-3"	1 1/2"	1 5/16"	—
12	3" -3 1/2"	2"	1 11/16"	—

HEAVY DUTY CONCRETE MASTERS

L1318



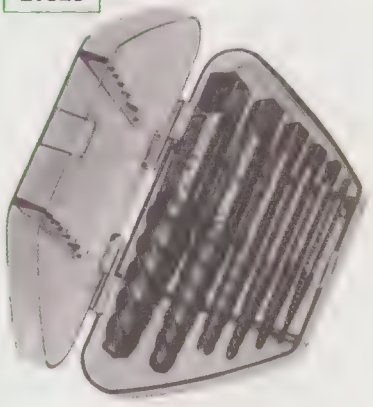
Length Overall 7" and 13"

Cutting Dia.	Shank Dia.
1/2"	3/8"
5/8"	3/8"
3/4"	1/2"
7/8"	1/2"
1"	1/2"
1 1/8"	3/8"
1 1/4"	3/8"
1 3/8"	3/8"
1 1/2"	3/8"
1 3/4"	3/8"
1 1/2"	3/8"
2"	3/8"

Extension Rods available.

SCREW EXTRACTOR SETS

L1320



Set 15 comprises 1, 2, 3, 4 and 5.
Set 15A comprises 1, 2, 3, 4, 5 and 6.

SCREW EXTRACTOR & DRILL SET No. 20

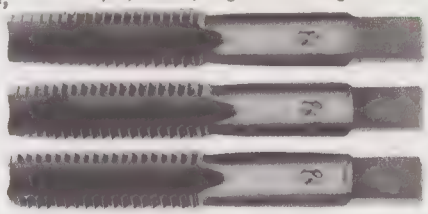
L1321

Comprising 1, 2, 3, 4 and 5 Extractor and recommended drills in Metal Case.

HAND TAPS CUT THREAD (Carbon Steel) For general use

TO CUT — Whitworth, British Fine, Unified National Coarse, Unified National Fine, Brass, and British Association

Supplied singularly or in sets of three comprising one each — Taper, Second, Plug or Bottoming



L1322 TAPER (7-9 Thread Lead)

L1323 SECOND (2½-5 Thread Lead)

L1324 BOTTOMING (1-1½ Thread Lead)

Diam. of Tap	Number of Threads to the Inch				
	Whit.	B.S.F.	U.N.C.	U.N.F.	Brass
1/8"	40	—	—	—	26
5/32"	—	—	—	—	26
3/16"	24	32	—	—	26
7/32"	—	28	—	—	26
1/4"	20	26	20	28	26
9/32"	—	26	—	—	—
5/16"	18	22	18	24	26
3/8"	16	20	16	24	26
7/16"	14	18	14	20	26
1/2"	12	16	13	20	26
9/16"	12	16	12	18	26
5/8"	11	14	11	18	26
11/16"	11	14	—	—	26
3/4"	10	12	10	16	26
13/16"	—	12	—	—	26
7/8"	9	11	9	14	26
1"	8	10	8	12	26
1 1/8"	7	9	7	12	26
1 1/4"	7	9	7	12	26
1 3/8"	—	8	6	12	26
1 1/2"	6	8	6	12	26
1 5/8"	—	8	—	—	26
1 3/4"	5	7	5	—	26
2"	4½	7	4½	—	26
2 1/4"	4	6	4½	—	—
2 1/2"	4	6	4	—	—

METRIC HAND TAPS

Systeme International, I.S.O., French C.N.M. and German D.I.N. Pitches

Nominal Dia. m.m.	Systeme International m.m. Pitch	French Pitch m.m.
2	0.40	0.40
2.5	0.45	0.45
3	0.50	0.60
3.5	0.60	0.60
4	0.70	0.75
4.5	0.75	0.75
5	0.75-0.80	0.90
6	1.00	1.00
7	1.00	1.00
8	1.00-1.25	1.25
9	1.25	1.25
10	1.00-1.25-1.50	1.50
11	1.50	1.50
12	1.25-1.50-1.75	1.75
14	1.25-1.50-2.00	2.00
16	2.00	2.00
18	1.50-2.50	2.50
20	1.50-2.50	2.50
22	2.50	2.50
24	3.00	3.00
27	3.00	3.00

B.A. THREAD

Thread Form 47.5° Carbon Steel

B.A. No.	Diam.		Pitch	
	m.m.	Ins.	m.m.	T.P.I.
0	6.0	0.236	1.00	25.4
1	5.3	0.208	0.90	28.2
2	4.7	0.185	0.81	31.4
3	4.1	0.161	0.73	34.8
4	3.6	0.142	0.66	38.5
5	3.2	0.126	0.59	43.0
6	2.8	0.110	0.53	47.9
7	2.5	0.098	0.48	52.9
8	2.2	0.086	0.43	59.1
9	1.9	0.075	0.39	65.1
10	1.7	0.067	0.35	72.6
11	1.5	0.059	0.31	81.9
12	1.3	0.051	0.28	90.9

MACHINE SCREW HAND TAPS (A.S.M.E.)

Screw Gauge No.	Outside Dia. Ins.	Fine Thread U.N.F.	Coarse Thread U.N.C.
0	0.060	80	—
1	0.073	72	64
2	0.086	64	56
3	0.099	56	48
4	0.112	48	40
5	0.125	44	40
6	0.138	40-36	32
7	0.151	36	24
8	0.164	36	32
9	0.177	32	32
10	0.190	32	24
12	0.216	28	24
14	0.242	24	20

L1325

B.S.P. GAS TAPS

For Pipe Threads
Cut Threads (Carbon Steel)

Supplied singularly Taper Second or Bottoming or in sets as required.

B.S.P.	Threads per inch	B.S.P.	Threads per inch
1/8"	28	1 1/4"	11
1/4"	19	2"	11
3/8"	19	2 1/4"	11
1/2"	14	2 1/2"	11
5/8"	14	2 3/4"	11
3/4"	14	3"	11
1"	11	3 1/2"	11
1 1/4"	11	4"	11
1 1/2"	11		

L1326 TAPER FORM

Taper Form Taps to produce taper thread. Bottoming Lead only.

L1327

ELECTRICAL CONDUIT TAPS

Diameter	1/2"	3/4"	3/4"	7/8"	1"	1 1/4"	1 1/2"	2"
Threads per inch	18	18	16	16	16	16	14	14

AMERICAN STANDARD PIPE TAPS

NPS Taps have taper, second or bottoming leads

NPT taps have bottoming lead only.

Nominal Size	Threads per inch
1/8	27
1/4	18
3/8	18
1/2	14
3/4	14
1	11 1/2
1 1/4	11 1/2
1 1/2	11 1/2
2	11 1/2
2 1/2	8
3	8
3 1/2	8
4	8

A.P.I. STANDARD PIPE TAPS

To suit American Petroleum Institute Specification for Line Pipe Standard 5L.

Nominal Size	Threads per inch
1/8	27
1/4	18
3/8	18
1/2	14
3/4	14
1	11 1/2
1 1/4	11 1/2
1 1/2	11 1/2
2	11 1/2
2 1/2	8
3	8
3 1/2	8
4	8

L1328

B.S.P.T. COMBINATION PIPE TAPS AND DRILLS (Carbon Steel)

For Gas and Water Main Tapping

Nominal size in inches	Size Square		Length		
	Small End	Large End	Square	Thread	Overall
1/4	1/2	3/4	1 1/2	1 1/16	3 7/8
3/8	1/2	3/4	1 3/4	1 1/16	3 7/8
1/2	1/2	3/4	1 3/4	1 3/8	4 1/4
3/4	1/2	3/4	1 3/4	1 3/8	4 1/4
1	1/2	3/4	1 3/4	1 3/4	4 5/8
1 1/4	1/2	3/4	1 3/4	1 3/4	4 3/4
1 1/2	1/2	3/4	1 3/4	1 3/4	4 7/8
2	3/4	1	2	1 3/4	5 3/8
2 1/2	3/4	1	2	2 1/16	6 3/8
3	3/4	1	2	2 3/8	6 3/4

L1329 PEARNS TYPE TAPPER TAPS

Carbon Steel Cut Thread, Whit. and B.S.P. (Parallel)

Second lead is standard. Taper and bottoming to order.

Size "A" (Shank dia. .678 inch)

1/8	1/4	5/16	3/8	7/16	1/2	5/8	3/4

Size "B" (Shank dia. .988 inch)

1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2

ALL DIMENSIONS INCHES EXCEPT METRIC HAND TAPS.

HAND TAPS GROUND THREAD (High Speed Steel)

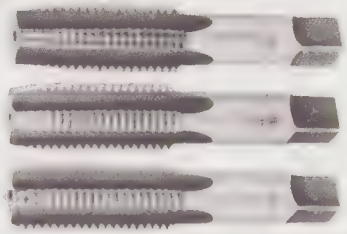
For longer life in producing high quality threads at greater speed

TO CUT — **Whitworth, British Standard Fine, Unified National Coarse, Unified National Fine, Brass, and British Association.**

L1330 TAPER

L1331 SECOND

L1332 BOTTOMING



Supplied singularly or in sets of three comprising one each — Taper, Second, Plug or Bottoming.

Diam. of Tap	Threads per Inch		Overall Length	Thread Length
	Whit.	B.S.F.		
3/32	48	—	1 1/4	7/16
1/8	40	—	1 1/16	3/8
5/32	32	—	2 1/8	3/4
7/32	24	32	2 1/8	1/2
9/32	24	28	2 1/8	5/8
1/4	20	26	2 1/4	1
5/16	20	26	2 1/4	1
3/8	18	22	2 1/2	1 1/8
7/16	16	20	2 1/16	1 1/4
1/2	14	18	3 1/8	1 7/16
9/16	12	16	3 1/8	1 5/8
5/8	12	16	3 7/16	1 5/8
11/16	11	14	3 1/16	1 11/16
3/4	11	14	4	1 11/16
7/8	10	12	4 1/4	2
1	9	11	4 1/16	2 1/4
1 1/8	8	10	5 1/8	2 1/2
1 1/4	7	9	5 7/16	2 7/16
1 3/8	7	9	5 3/4	2 7/16
1 1/2	6	8	6 1/16	3
1 3/4	6	8	6 3/8	3
1 7/8	5	8	6 11/16	3 7/16
1 3/4	5	7	7	3 7/16
2	4 1/2	7	7 3/8	3 7/16

BRITISH STANDARD PIPE

L1334 PARALLEL

L1335 TAPER FORM

Nominal Diam.	Threads per Inch	Overall Length	Thread Length	Overall Length	Thread Length
1/16	28	2 1/8	3/4	2 1/8	3/4
1/8	19	2 7/16	1 7/16	2 7/16	1 7/16
3/8	19	2 7/16	1 7/16	2 7/16	1 7/16
1/4	14	3 1/8	1 3/4	3 1/8	1 3/4
5/8	14	3 7/16	1 3/4	—	—
3/4	14	3 1/2	1 3/4	3 1/2	1 3/4
7/8	14	3 1/2	1 7/16	—	—
1	11	3 3/4	1 3/4	3 3/4	1 3/4
1 1/4	11	4	1 3/4	4	1 3/4
1 1/2	11	4 1/2	1 3/4	4 1/2	1 3/4
1 3/4	11	4 3/4	1 3/4	—	—
2	11	4 1/2	1 3/4	4 1/2	1 3/4

BRASS THREAD

Nominal Diam.	Threads per inch	Overall Length	Thread Length
1/4	26	2 1/2	1
7/32	26	2 3/4	1 1/4
9/32	26	2 13/16	1 1/2
5/16	26	3	1 1/2
3/8	26	3	1 1/2
7/16	26	3	1 1/2
1/2	26	3	1 1/2
9/16	26	3 1/2	1 1/2
5/8	26	3 1/2	1 1/2
1	26	3 1/2	1 1/2
1 1/8	26	4	1 1/2
1 1/4	26	4	1 1/2
1 1/2	26	4	1 1/2

METRIC

Overall Length	Thread Length	Nom. Dia. (m.m.)	Pitch (mm)
2 1/2	1	6	1.00
2 1/2	1	7	1.00
2 3/4	1 1/8	8	1.25
2 13/16	1 1/2	9	1.25
3 1/8	1 7/16	10	1.50
3 1/8	1 7/16	11	1.50
3 3/4	1 3/4	12	1.75
3 7/16	1 3/4	14	2.00
3 11/16	1 11/16	16	2.00
4	1 11/16	18	2.50
4 7/16	2	20	2.50
4 11/16	2 1/2	22	2.50
4 3/4	2 1/2	24	3.00

L1333

BRITISH STANDARD CONDUIT

Nominal Diam.	Threqds per inch	Overall Length	Thread Length
1/2	18	3	1 1/4
3/4	18	3	1 1/4
3/4	16	3 1/2	1 1/2
1	16	3 1/2	1 1/2
1 1/4	16	4	1 1/2
1 1/2	14	4	1 1/2
2	14	5	2

UNIFIED THREAD

Also Available 1" 14 T.P.I.

Nominal Diam.	Threads per Inch		Overall Length	Thread Length	Shank Diam.
	UNC	UNF			
No. 2	56	64	1 3/4"	7/16	0.128
No. 3	48	56	1 1/16	1/2	0.128
No. 4	40	48	1 1/8	7/16	0.128
No. 5	40	44	1 1/16	3/8	0.128
No. 6	32	40	2	11/16	0.144
No. 8	32	36	2 1/8	3/4	0.166
No. 10	24	32	2 3/8	7/8	0.189
No. 12	24	28	2 3/8	7/8	0.221
1/4	20	28	2 1/2	1	0.253
5/16	18	24	2 3/4	1 1/8	0.315
3/8	16	24	2 1/16	1 1/2	0.377
7/16	14	20	3 1/8	1 7/16	0.323
1/2	13	20	3 3/8	1 3/8	0.367
9/16	12	18	3 7/16	1 3/8	0.429
5/8	11	18	3 11/16	1 11/16	0.480
3/4	10	16	4 1/2	2	0.590
7/8	9	14	4 1/16	2 1/2	0.697
1	8	12	5 1/8	2 1/2	0.800
1 1/8	7	12	5 7/16	2 7/16	0.896
1 1/4	7	12	5 3/4	2 7/16	1.021
1 3/8	6	12	6 1/16	3	1.108
1 1/2	6	12	6 3/8	3	1.233
1 3/4	5	12	7	3 7/16	1.430
2	4 1/2	12	7 3/8	3 7/16	1.644

B.A. THREADS

Size	Diam. M.M.	Thread Pitch (approx.)	Overall Length	Thread Length
0 BA	6.0	0.3094	2 1/2	1
1 BA	5.3	0.0354	2 3/8	7/8
2 BA	4.7	0.0319	2 3/8	7/8
3 BA	4.1	0.0287	2 1/8	3/4
4 BA	3.6	0.0260	2	11/16
5 BA	3.2	0.0232	1 13/16	5/8
6 BA	2.8	0.0209	1 5/8	7/16
7 BA	2.5	0.0189	1 13/16	1/2
8 BA	2.2	0.0169	1 3/8	7/16
9 BA	1.9	0.0154	1 11/16	3/8
10 BA	1.7	0.0138	1 3/8	1/4

AMERICAN NATIONAL PIPE

Straight N.P.S. and Taper N.P.T.

Nominal Diam.	Threads per inch	Overall Length	Thread Length
1/16	27	2 1/8	3/4
1/8	18	2 7/16	1 7/16
3/8	18	2 7/16	1 7/16
1/4	14	3 1/8	1 3/4
3/8	14	3 1/4	1 3/4
1	11 1/2	3 3/4	1 3/4
1 1/4	11 1/2	4	1 3/4
1 1/2	11 1/2	4 1/4	1 3/4
2	11 1/2	4 1/2	1 3/4

Also Available in Fine Thread

DIMENSIONS INCHES EXCEPT WHERE M.M. SPECIFIED

MACHINE TAPS High Speed Steel

L1336 GROUND THREAD SPIRAL FLUTED TAPS

B.S.W. — B.S.F. — U.N.C. — U.N.F.

Available with R.H. Spiral Flutes and with Intermediate or Bottoming Leads

Recommended for blind hole machine tapping. Also suitable for soft and ductile materials and materials that present machining difficulties.

STANDARD RANGE

B.S.W.	1/8", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", 1"
B.S.F.	1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1"
U.N.C.	No. 6, No. 8, No. 10—1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1"
U.N.F.	No. 6, No. 8, No. 10—1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 7/8", 1"

Dimensions of taps listed are identical with the standard hand taps.

L1337 GROUND THREAD SPIRAL POINT CHIPDRIVER TAPS

B.S.W. — B.S.F. U.N.C. — U.N.F. — B.A.

Available in Intermediate Lead. All sizes have Two Shallow Flutes

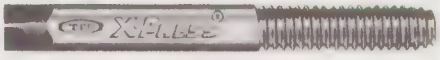
Commonly referred to as Gun Taps. Recommended for the machine tapping of through holes or for blind holes that have sufficient space to accommodate the chips.

STANDARD RANGE

B.S.W.	1/8", 5/32", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", 1"
B.S.F.	7/16", 1/2", 9/16", 5/8", 7/8", 1/2", 1 1/16", 5/8", 3/4", 7/8", 1"
U.N.C.	No. 6, No. 8, No. 10, No. 12—1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", 1"
U.N.F.	No. 6, No. 8,. No. 10, No. 12—1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 7/8", 1"
B.A.	0, 1, 2, 3, 4, 5, 6, 7, 8

L1338 X-PRESS® FLUTELESS TAPS

B.S.W. — B.S.F. BRASS — U.N.C. — U.N.F. — B.A.



Available in Intermediate and Bottoming

STANDARD RANGE

B.S.W.	1/8", 5/32", 3/16", 7/32", 1/4", 5/16", 3/8", 7/16", 1/2"
B.S.F.	3/16", 1/4", 5/16", 3/8", 7/16", 1/2"
BRASS	1/4", 5/16", 3/8", 7/16", 1/2"
U.N.C.	No. 4., No. 5, No. 6, No. 8, No. 10, No. 12—1/4", 5/16", 3/8", 7/16", 1/2"
U.N.F.	No. 4, No. 5, No. 6, No. 8, No. 10, No. 12—1/4", 5/16", 3/8", 7/16", 1/2"
B.A.	0, 1, 2, 3, 4, 5, 6, 8, 10

L1339 MACHINE NUT TAPS — Taper Lead 2/3 of Thread Length

B.S.W. — B.S.F. — U.N.C. — U.N.F. — B.A.

HIGH SPEED STEEL Ground Thread

Nominal Diam.	Witworth Threads per inch	Witworth Overall Length	Witworth Thread Length	B.S.F. Threads per inch	B.S.F. Overall Length	B.S.F. Thread Length	Shank Diam.
1/8	40	3 3/8	3/8	—	—	—	0.090
5/32	32	4	3/4	—	—	—	0.132
3/16	24	4 1/4	1	32	4	3/4	0.132
1/4	20	5	1 1/4	26	5	7/8	0.185
5/16	18	5 1/2	1 3/16	22	5 1/2	1 1/16	0.240
3/8	16	6	1 1/2	20	6	1 1/8	0.294
7/16	14	6 1/2	1 3/4	18	6 1/2	1 1/4	0.345
1/2	12	7	2	16	7	1 3/8	0.367
9/16	12	7 1/2	2	16	7 1/2	1 3/8	0.450
5/8	11	8	2	14	8	2	0.503
11/16	11	8 1/2	2	14	8 1/2	2	0.565
3/4	10	9	2 1/2	12	9	2 1/2	0.616
7/8	9	10	2 1/2	11	10	2 1/2	0.727
1"	8	11	2 3/4	10	11	2 3/4	0.834
1 1/8	7	11 1/2	3	9	11 1/2	3	0.933
1 1/4	7	12	3	9	12	3	1.058
1 1/2	6	13	3 1/2	8	13	3 1/2	1.278

Nominal Diam.	U.N.C. Threads per inch	U.N.C. Overall Length	U.N.C. Thread Length	U.N.F. Threads per inch	U.N.F. Overall Length	U.N.F. Thread Length	Shank Diam.
No. 5	40	3 3/8	3/8	44	3 3/8	3/8	0.090
No. 6	32	3 3/4	1 1/16	40	3 3/4	1 1/16	0.995
No. 8	32	4	3/4	36	4	3/4	0.121
No. 10	24	4 1/4	1	32	4 1/4	3/4	0.132
No. 12	24	4 1/4	1	28	4 3/4	1 1/16	0.160
1/4	20	5	1 1/4	28	5	7/8	0.185
5/16	18	5 1/2	1 3/16	24	5 1/2	1 1/16	0.240
3/8	16	6	1 1/2	24	6	1 1/8	0.294
7/16	14	6 1/2	1 3/4	20	6 1/2	1 1/4	0,345
1/2	13	7	2	20	7	1 3/8	0.367
9/16	12	7 1/2	2	18	7 1/2	1 3/8	0.450
5/8	11	8	2	18	8	1 3/8	0.503
3/4	10	9	2 1/2	16	9	1 1/2	0.616
7/8	9	10	2 1/2	14	10	1 3/4	0.727
1(UNS)	—	—	—	14	11	2	0.834
1	8	11	2 3/4	12	11	2	0.834
1 1/8	7	11 1/2	3	12	11 1/2	2	0.933
1 1/4	7	12	3	12	12	2	1.058
1 1/2	6	13	3 1/2	12	13	2	1.278

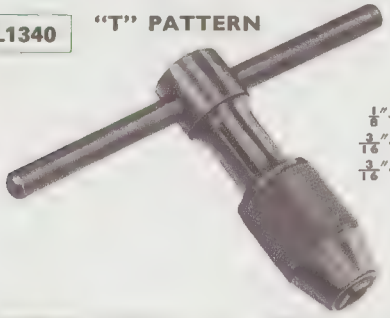
B.A. THREAD

Nominal Diam.	Threads Pitch (approx.)	Overall Length	Thread Length	Shank Diam.
0 BA	0.0394	5	7/8	0.185
1 BA	0.0354	4 1/2	11/16	0.160
2 BA	0.0319	4 1/2	3/4	0.132
3 BA	0.0287	4	3/4	0.121
4 BA	0.0260	3 1/2	11/16	0.095
5 BA	0.0232	3 3/8	5/8	0.090
6 BA	0.0209	3 1/2	9/16	0.077
7 BA	0.0189	3 1/2	11/32	0.070
8 BA	0.0169	3	7/16	0.060

STOCKS AND TAP WRENCHES

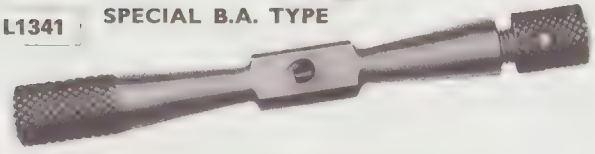
ADJUSTABLE TAP WRENCHES

L1340 "T" PATTERN



1/8"-1/4" capacity
3/16"-3/8" capacity
3/16"-1/2" capacity

L1341 SPECIAL B.A. TYPE



Capacity 13 B.A. to 5 B.A. and equivalent sizes in Whitworth, ASME, and Metric.

L1342 BAR TYPE

No.	0	5	6	7	7■	8
Capacity	1/8"-1/4"	3/16"-3/8"	1/4"-3/4"	3/16"-1 1/8"	3/16"-1 1/8"	3/4"-1 1/2"

BUTTON STOCKS (O.K. TYPE)

(Adjustable Guides)

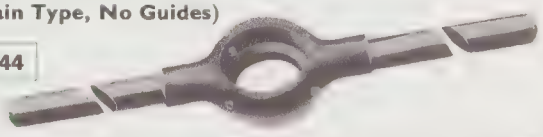
L1343

Stock No.	1½ O.K.	2 O.K.
Cutting Sizes of Dies	1/8"-3/4"	1/4"-1"

BUTTON STOCKS

(Plain Type, No Guides)

L1344



1 1/2" Stock	1/16"-3/8" Cutting Sizes
1" Stock	1/16"-1/2" Cutting Sizes
1½" Stock	1/8"-3/4" Cutting Sizes

ELASTIC STOCKS

L1345

Diameter	7/8"	1 1/2"	2 3/16"	2 1/2"	3 7/16"
Cutting Sizes of Dies	1/8"-1/4"	1/8"-1/2"	3/16"-1"	1/4"-1 1/4"	7/8"-1 1/2"

WARRAGUL PATTERN STOCKS

L1346 RATCHET TYPE

L1347 SOLID TYPE

Stock No.	Outside Dimensions of Die	Cutting Range
No. 1 Solid	2 1/8" x 2 1/8" x 1/2"	1/8"-1" BSPT. 3/8"-1 1/4" Conduit
No. 1 Rachet	2 1/8" x 2 1/8" x 1/2"	1/8"-1 1/4" BSPT. 3/8"-1 1/4" Conduit
No. 2 Rachet	3 1/8" x 3 1/8" x 1/2"	1"-2" BSPT.

AUS-TEC No. 4R (OSTER PATTERN) PIPE STOCK AND DIES — RATCHET TYPE

L1348

The Aus-Tec No. 4R Ratchet type Stock and Dies permits thread cutting from 1/4" to 2" B.S.P. taper, 1/2" to 2" B.S. Conduit, 1/4" to 2" B.S.W.

Supplied complete with three sets of dies, suitable for 1/2" and 3/4" Pipe, 1" and 1 1/4" Pipe, 1 1/2" and 2" Pipe.

Conduit and Bolt Thread Dies can be supplied to suit this stock.

L1349 CIRCULAR SPLIT BUTTON DIES

(Carbon Steel)

RIGHT OR LEFT HAND

Supplied in Whitworth, B.S.F., U.N.C., U.N.F., Brass, Conduit and Metric Threads.

For use in hand stocks. High Speed Steel Dies are recommended for machine use.

Cutting Size	Diameter of Die in Inches			
1/16*	1 1/2	1	—	—
5/64*	1 1/2	1	—	—
1/8†	1 1/2	1	1 1/2	2
5/64†	1 1/2	1	1 1/2	2
3/16	1 1/2	1	1 1/2	2
7/64	1 1/2	1	1 1/2	2
1/4	1 1/2	1	1 1/2	2
5/16	1 1/2	1	1 1/2	2
3/8	1 1/2	1	1 1/2	2
7/16	—	1	1 1/2	2
1/2	—	1	1 1/2	2
9/16	—	—	1 1/2	2
5/8	—	—	1 1/2	2
11/16	—	—	1 1/2	2
3/4	—	—	1 1/2	2
7/8	—	—	—	2
1	—	—	—	2

* Whitworth only. † Not available in U.N.F. or B.S.F.

Conduit Dies available in 1½ in. and 2 in. diameter, ½ — 1 in. screwing sizes.

BRITISH STANDARD PIPE (Carbon Steel)

PARALLEL THREAD

B.S.P.T., N.P.T. and N.P.S. are also available.

Button Pattern Machine Dies are supplied with screw, taper pin, or plain slot adjustment. Machine Dies are supplied short lead unless standard lead is specified.

Nom. size in inches and Threads per inch.	Diameter of Die in Inches		
1/8 x 28	1	1 1/2	2
1/4 x 19	1	1 1/2	2
3/8 x 19	—	1 1/2	2
1/2 x 14	—	1 1/2	2
3/4 x 14	—	—	2
1 x 11	—	—	2

CIRCULAR SPLIT BUTTON DIES

B.A. Thread — 13/16" and 1" diameter.
Carbon Steel — Sizes 0 to 12 B.A.

L1351 SOLID (Square) WARRAGUL PIPE DIES

(Carbon Steel)

B.S.P.T. and Conduit Threads

B.S.P.T. CUTTING SIZES

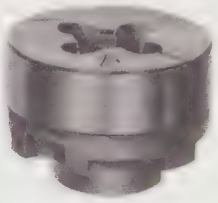
No. of Die	Size of Square	Cutting Sizes
1	2 3/8 x 2 3/8 x 3/4	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4
2	3 1/2 x 3 1/2 x 7/8	1, 1 1/4, 1 1/2, 2

CONDUIT CUTTING SIZES (Parallel Threads)

1	2 3/8 x 2 3/8 x 3/4	3/8, 1/2, 1, 1 1/4

L1350 ELASTIC DIES AND GUIDES

(Carbon Steel)



RIGHT OR LEFT HAND

Whitworth, British Standard Fine, U.N.C., U.N.F., Brass and Conduit Threads.

Interchangeable with "Green River" Pattern.

Cutting Size	Diameter of Die in Inches				
1/8*	7/8	1 1/8	—	—	—
5/32	7/8	1 1/8	2 3/16	—	—
1/4	7/8	1 1/8	2 3/16	2 3/4	—
5/16	—	1 1/8	2 3/16	2 3/4	—
3/8	—	1 1/8	2 3/16	2 3/4	—
7/16	—	1 1/8	2 3/16	2 3/4	—
1/2	—	1 1/8	2 3/16	2 3/4	—
5/16	—	—	2 3/16	2 3/4	—
5/8	—	—	2 3/16	2 3/4	—
11/16	—	—	2 3/16	2 3/4	—
3/4	—	—	2 3/16	2 3/4	—
7/8	—	—	2 3/16	2 3/4	3 7/16
1	—	—	2 3/16	2 3/4	3 7/16
1 1/8	—	—	—	2 3/4	3 7/16
1 1/4	—	—	—	2 3/4	3 7/16
1 1/2	—	—	—	—	3 7/16
1 3/4	—	—	—	—	3 7/16

* Not available in U.N.F. or B.S.F.

BRITISH STANDARD PIPE

(Carbon Steel)

RIGHT HAND THREAD

Parallel Thread Supplied Unless Taper Specified

Pipe Size	Threads per inch	Diam. in inches	Outside Diameter	
1/8	28	0.383	2 3/16	2 3/4
1/4	19	0.518	2 3/16	2 3/4
3/8	19	0.656	2 3/16	2 3/4
1/2	14	0.825	2 3/16	2 3/4
3/4	14	1.041	2 3/16	2 3/4
1	11	1.309	2 3/16	2 3/4

METRIC THREAD

RIGHT HAND

Systeme International, I.S.O., French C.N.M. and German D.I.N. Pitches

Cutting Size of Die in m.m.	Equiv. in inches	Inter. Pitch, m.m.	French Pitch, m.m.	Outside Diameter
6	0.2362	1.0	1.0	2 3/16
7	0.2755	1.0	1.0	2 3/16
8	0.3149	1.25	1.25	2 3/16
10	0.3937	1.50	1.50	2 3/16
12	0.4724	1.75	1.75	2 3/16
14	0.5511	2.0	2.0	2 3/16
16	0.6299	2.0	2.0	2 3/16
18	0.7087	2.5	2.5	2 3/16
20	0.7874	2.5	2.5	2 3/16
22	0.8661	2.5	2.5	2 3/16
24	0.9449	3.0	3.0	2 3/16

DIMENSIONS INCHES EXCEPT WHERE M.M. SPECIFIED

L1353 ELASTIC STOCK AND DIE SETS

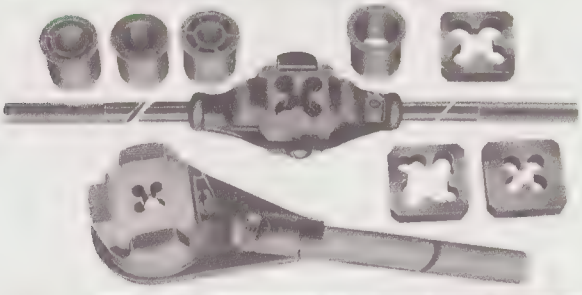
Supplied in Polished Wooden Cases

Whitworth, B.S.F., U.N.C., U.N.F. and Brass Thread

All component parts are fully interchangeable with the American "Green River" Pattern Stocks and Dies.

Set No.	Set contains 1 Taper Tap, Die and Guide each size, supplied with Tap Wrench and Die Stock	Guide and Dies Diam. in inches	Tap Wrench No.
156	¼, 5/32, 3/16, 7/32, ¼	⅞	0
5000	3/16, ¼, 5/16, ⅜, 7/16, ½	1½	5
5001A	¼, 5/16, ⅜, 7/16, ½	1½	5
D.5001	¼, 5/16, ⅜, 7/16, ½	2 1/16	5
D.5002	¼, ⅜, ½, ⅝	2 3/16	6
D.5004	¼, ⅜, ½, ⅞, 1	2 7/16	7
D.5004-½	¼, ⅜, ½, ⅞, 1	2⅝	7
D.5005	¼, 5/16, ⅜, 7/16, ½, ⅝, ¾	2 7/16	6
D.5005-½	¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾	2 7/16	6
D.5007	¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1	2 7/16	0-7
D.5007-½	¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1	2⅝	0-7
D.5025	⅞, 1, 1¼, 1½, 1⅝, 1¾	3 7/16	8
D.5040	¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1 1⅛, 1¼	2 7/16 2⅝	5-7B 5-7B
Garage Set A	¼, 5/16, ⅜, 7/16, ½ (Whit.), ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾ (U.N.F.)	2 7/16	6
Garage Set B	¼, 5/16, ⅜, 7/16, ½ (B.S.F.), ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾ (U.N.F.)	2 7/16	6

L1354 WARRAGUL (Square) PIPE STOCK AND DIE SETS



Set No.	Range	Outside Dimensions of Dies
W.2	¼, ⅜, ½, ¾, 1	2⅜ × 2⅜ × ⅜
W.2R	¼, ⅜, ½, ¾, 1	
W.3	½, ¾, 1	
W.3R	½, ¾, 1	
W.4R	½, ¾, 1, 1¼	
W.4AR	¼, ⅜, ½, ¾, 1, 1¼	
W.4BR	¾, 1, 1¼	
W.5R	1, 1¼, 1½, 2	3⅞ × 3⅞ × ⅞
W.6R	1½, 1⅝, 2	

CONDUIT STOCK AND DIE SETS

Set No.	Range	Type	Outside Dimensions of Dies
21	⅜, ¾, 1	With Solid Stock	2⅜ × 2⅜ × ¾
21R	⅜, ¾, 1	With Ratchet Stock	
20	⅜, ¾, 1, 1¼	With Solid Stock	
20R	⅜, ¾, 1, 1¼	With Ratchet Stock	

Supplied with Solid or Ratchet Stocks

"R" indicates Ratchet Stock

L1352 BUTTON PATTERN STOCK AND DIE SETS

Supplied in Polished Wooden Cases

Similar to British "Whirlwind" or American "O.K." Pattern.

Sets supplied with Circular Split Dies having screw adjustment.

Whitworth, B.S.F., U.N.F., U.N.C. and Brass Thread

Spare Dies and Taps available.

The stock is fitted with an Adjustable Guide, which can be quickly adjusted to accommodate any size Die in the Set.

Set No.	Set contains 1 Taper Tap and Die each Size, supplied with Tap Wrench and Die Stock	Diam. Die Inches	Tap Wrench Size
O.K.1	¼, 5/16, ⅜, 7/16, ½	1½	5
O.K.1-½	¼, 5/16, ⅜, 7/16, ½	2	5
O.K.2	¼, ⅜, ½, ⅝, ¾	2	6
O.K.4	½, ⅝, ¾, ⅞, 1		7
O.K.5	¼, 5/16, ⅜, 7/16, ½, ⅝, ¾	2	6
O.K.5-½	¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾	2	6
O.K.7	¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1	2	0-7
O.K.7½	¼, 5/16, ⅜, 9/16, ½, 9/16, ⅝, ¾, 1	2	0-7
O.K.8	¼, ⅜, ½, ⅝, ¾, ⅞, 1	2	0-7

COMBINATION SETS

COM.1	¼, 5/16, ⅜, 7/16, ½ Whit. ¼, 5/16, ⅜, 7/16, ½ B.S.F.	1½	5
COM.2	¼, 5/16, ⅜, 7/16, ½ Whit. ¼, 5/16, ⅜, 7/16, ½ U.N.F.	1½	5
COM.3	¼", 5/16", ⅜, 7/16, ½ B.S.F. ¼, 5/16, ⅜, 7/16, ½ U.N.F.	1½	5
COM.4	1¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾ Whit. ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾ U.N.F.	2	6
COM.5	¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾ B.S.F. ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾ U.N.F.	2	6
COM.6	¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾ Whit. ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾ B.S.F.	2	6
54	¼, 5/16, ⅜, 7/16, ½	1½	—
A.S.M.E.1	No. 0 x 80; No. 1 x 72; No. 2 x 64; No. 3 x 56; No. 4 x 48; No. 5 x 44; No. 6 x 40; No. 8 x 36; No. 10 x 32; No. 12 x 28.	1	—

METRIC THREADS (INTERNATIONAL PITCH)

M.E.1	3, 4, 5, 6, 7, 8, 9, 10 m.m.	1	—
M.E.2	6, 7, 8, 9, 10, 11, 12 m.m.	1	—

B.A. THREAD

B.A.1	0, 1, 2, 3, 4, 5, 6	1	—
B.A.2	0, 1, 2, 3, 4, 5, 6, 7, 8	1	—
B.A.3	0, 1, 2, 3 ,4, 5, 6, 7, 8, 9, 10	1	—

CONDUIT BUTTON DIE SETS

Set No. 17 — Cutting sizes ⅝" and ¾" Conduit thread, 2" diameter button dies and adjustable stock in cardboard carton.

Set No. 18 — Cutting sizes ⅝", ¾" and 1" Conduit thread, 2" diameter button dies and adjustable stock in cardboard carton.

L1355 HEXAGON DIE NUTS

Right or Left Hand Thread

Available in Whitworth, B.S.F., U.N.C., U.N.F., Brass and Gas Threads.
Cutting Sizes: ¼" to 2"
Available in Sets

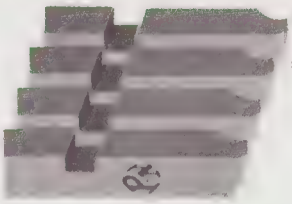
L1357 RADIAL HAND DIES

OSTER TYPE

Stock No.	Cutting Sizes	Standard Pack
1, 1A Leader Receder	1, 1½, 1½, 2 B.S.P. Taper	In Separate Sets
01, 01-R, 11, 11-A Bull Pup	¼, ⅜, ½, ¾, 1 B.S.P. Taper ¼, ⅜, ½, ¾, 1 B.S. Conduit	In Separate Sets
42 Receder	1, 1½, 1½, 2 B.S.P. Taper	In Separate Sets
44 Receder	2½, 3, 3½, 4 B.S.P. Taper	5 Blades per Set In Separate Sets

RIDGID TYPE

Stock No.	Cutting Sizes
65R, 65R-TC	1 to 2 B.S.P. Taper (interchangeable with Millerchip and Wolfe "Easi-Threader"



PIPER THREADMASTER TYPE

¼, ¾, 1, 1¼ B.S.P. Taper	Separate Sets

EASTERBROOK TYPE

Stock No.	Cutting Sizes	Standard Pack
460	1, 1¼, 1½, 2 B.S.P. Taper	1 Set
480	2½, 3, 3½, 4 B.S.P. Taper	1 Set of 5 Dies

CARRINGTON "EGA KUT" No. 129 Receder Type

Stock No.	Cutting Sizes	Standard Pack
1	1, 1¼, 1½, 2 B.S.P. Taper	4 Sets 1A Oster Interchangeable
2	2½, 3, 3½, 4 B.S.P. Taper	4 Sets of 5 Dies per Set
3	4, 5, 6 B.S.P. Taper	3 Sets of 5 Dies per Set

L1356 RADIAL HAND DIES

Please state cutting size, P. & N. Symbol and/or make of stock and stock number.

P. & N. Symbol	Oster Bulldog Stock No.	Chatwin 48 Stock No.	Carrington EGA-KUT 126 Stock No.	Easterbrook PRESTO 150 Stock No.	Cutting Sizes		
					B.S.P. Taper	B.S. Conduit	Whitworth
2D	102, 112	1R	1, 1R	1, 1R	¼-⅜, ½-¾ 1-1¼	—	¼-1½
2D	112C	1R	1C	1C	—	¼-⅜, ½-¾, 1-1¼, 1½,	—
3D	103, 104, 104½, 113, 114, 114½	2, 3, 3½	2, 3, 3½	2, 3, 3½	¼-⅜, ½-¾, 1-1¼, 1½-2	—	¼-2
3D	113C	2, 3, 3½	2, 3, 3½	2C		¼-⅜, ½-¾, 1-1¼, 1½-2	—

AUSTEC 4R ¼ to 2 B.S.P. Taper, ¼ to 2 B.S. Conduit, ¼ to 2 Whitworth takes 3D P & N. Dies.

WHITWORTH HAND CHASERS

L1359 Inside

L1360 Outside

Size of Bolt	Threads per in.
¼"	40
5/16"	24
⅜"	20
7/16"	18
½"	16
9/16"	14
⅝"	12
¾"	11
⅞"	10
1"	9
1⅛"	8
1¼"	7
1⅜"	7
1½"	6
1⅝"	6
1¾"	5
1⅞"	5
2"	4½
2¼"	4½
2½"	4
2¾"	4
3"	3½
3½"	3½

L1358 RADIAL MACHINE DIES

Orders must state cutting size and machine number or capacity.

OSTER TYPE MACHINES

M/C. No.	B.S.P. Taper	Whitworth
No. 300, 502 552 McPherson No. 2	¼-⅜, ½-¾, 1-1¼, 1½-2	¼-1½
No. 302 Granowski 2"	¼-⅜, ½-¾, 1-1¼, 1½-2	¼-2
No. 304 Granowski 4"	¼-¾, 1-1¼, 1½-2, 2½-3, 3½-4	¼-2
No. 306	1-1¼, 1½-2, 2½-3, 3½-4, 4½-5, 5½-6	1-2
No. 316	1-1¼, 1½-2, 2½-3, 3½-4, 4½-5, 5½-6 (6 Dies per Set)	1-2
Granowski 67	¼-2 B.S.P.T. and N.P.T., ¼-2 Whit., using P. N. 3D Dies	¼-2 B.S. Conduit

L1361 SLIDE REST MACHINE CHASERS

Machine Chasers are regularly supplied in British Standard Whitworth Thread. Other threads supplied at special prices. Left hand Chasers are special.

Size of Bolt in inches	Threads per inch	Size of Bolt in inches	Threads per inch
¼	40	1½	7
5/16	24	1⅝	6
⅜	20	1¾	6
7/16	18	1⅞	5
½	16	2	5
9/16	14	2¼	4½
⅝	12	2½	4½
¾	11	2¾	4
⅞	10	3	4
1	9	3¼	3½
1⅛	8	3½	3½
1¼	7	—	—

PARALLEL REAMERS High Speed Steel

LEFT HAND SPIRAL FLUTES — RIGHT HAND CUTTING

L1362 PARALLEL HAND REAMERS

Hand Reamers have unequal spaced flutes to minimise chatter and are supplied with a 2° included angle taper lead to facilitate reaming by hand.

L1363 MACHINE REAMERS

Machine Reamers have unequal spaced flutes to minimise chatter and are supplied with a 45° bevel lead.
* Flute Length $\frac{3}{8}$" longer Machine Reamers.

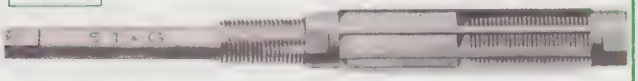
ALL DIMENSIONS INCHES

Diameter	Flute Length	No. of Flutes	Length Overall		Morse Taper Shank
			Hand Reamer	Machine Reamer	
$\frac{1}{8}$	$1\frac{1}{2}$	4	3	3	S.S.
$\frac{9}{64}$	$1\frac{1}{2}$	4	3	3	S.S.
$\frac{5}{32}$	$1\frac{1}{2}$	4	3	3	S.S.
$\frac{11}{64}$	$1\frac{1}{2}$	6	3	3	S.S.
$\frac{3}{16}$	$1\frac{1}{2}$	6	3	3	S.S.
$\frac{13}{64}$	2	6	4	4	S.S.
$\frac{7}{32}$	2	6	4	4	S.S.
$\frac{15}{64}$	2	6	4	4	S.S.
$\frac{1}{4}$	2	6	4	4	S.S.
$\frac{1}{4}$	2	6	—	$5\frac{1}{4}$	1
$\frac{17}{64}$	2	6	4	$5\frac{1}{4}$	1
$\frac{9}{32}$	2	6	4	$5\frac{1}{4}$	1
$\frac{19}{64}$	2	6	4	$5\frac{1}{4}$	1
$\frac{5}{16}$	2	6	4	$5\frac{1}{4}$	1
$\frac{21}{64}$	$2\frac{1}{2}$	6	5	$5\frac{7}{8}$	1
$\frac{11}{32}$	$2\frac{1}{2}$	6	5	$5\frac{7}{8}$	1
$\frac{23}{64}$	$2\frac{1}{2}$	6	5	$5\frac{7}{8}$	1
$\frac{3}{8}$	$2\frac{1}{2}$	6	5	$5\frac{7}{8}$	1
$\frac{25}{64}$	$2\frac{1}{2}$	6	5	$5\frac{7}{8}$	1
$\frac{13}{32}$	$2\frac{1}{2}$	6	5	$5\frac{7}{8}$	1
$\frac{27}{64}$	$2\frac{1}{2}$	6	5	$5\frac{7}{8}$	1
$\frac{7}{16}$	$2\frac{1}{2}$	6	5	$5\frac{7}{8}$	1
$\frac{29}{64}$	3	6	6	$6\frac{1}{2}$	1
$\frac{15}{32}$	3	6	6	$6\frac{1}{2}$	1
$\frac{31}{64}$	3	6	6	$6\frac{1}{2}$	1
$\frac{1}{2}$	3	6	6	$6\frac{1}{2}$	1
$\frac{33}{64}$	3	6	6	$6\frac{1}{2}$	1
$\frac{17}{32}$	3	6	6	$6\frac{1}{2}$	1
$\frac{35}{64}$	3	6	6	$6\frac{1}{2}$	1
$\frac{9}{16}$	3	6	6	$6\frac{1}{2}$	1
$\frac{37}{64}$	$3\frac{1}{2}$	6	7	$7\frac{3}{4}$	2
$\frac{19}{32}$	$3\frac{1}{2}$	6	7	$7\frac{3}{4}$	2
$\frac{39}{64}$	$3\frac{1}{2}$	6	7	$7\frac{3}{4}$	2
$\frac{5}{8}$	$3\frac{1}{2}$	6	7	$7\frac{3}{4}$	2
$\frac{41}{64}$	$3\frac{1}{2}$	6	7	$7\frac{3}{4}$	2
$\frac{21}{32}$	$3\frac{1}{2}$	6	7	$7\frac{3}{4}$	2
$\frac{43}{64}$	$3\frac{1}{2}$	6	7	$7\frac{3}{4}$	2
$\frac{11}{16}$	$3\frac{1}{2}$	6	7	$7\frac{3}{4}$	2
$\frac{45}{64}$	4	8	8	$8\frac{3}{8}$	2
$\frac{23}{32}$	4	8	8	$8\frac{3}{8}$	2
$\frac{47}{64}$	4	8	8	$8\frac{3}{8}$	2
$\frac{3}{4}$	4	8	8	$8\frac{3}{8}$	2
$\frac{49}{64}$	4	8	8	$8\frac{3}{8}$	2
$\frac{25}{32}$	4	8	8	$8\frac{3}{8}$	2
$\frac{51}{64}$	4	8	8	$8\frac{3}{8}$	2

Diameter	Flute Length	No. of Flutes	Length Overall		Morse Taper Shank
			Hand Reamer	Machine Reamer	
$\frac{13}{16}$	4	8	8	$8\frac{3}{8}$	2
$\frac{53}{64}$	$4\frac{1}{2}$	8	9	$8\frac{7}{8}$	2
$\frac{27}{32}$	$4\frac{1}{2}$	8	9	$8\frac{7}{8}$	2
$\frac{55}{64}$	$4\frac{1}{2}$	8	9	$8\frac{7}{8}$	2
$\frac{7}{8}$	$4\frac{1}{2}$	8	9	$8\frac{7}{8}$	2
$\frac{57}{64}$	$4\frac{1}{2}$	8	9	$8\frac{7}{8}$	2
$\frac{29}{32}$	$4\frac{1}{2}$	8	9	$8\frac{7}{8}$	2
$\frac{59}{64}$	$4\frac{1}{2}$	8	9	$9\frac{3}{4}$	3
$\frac{15}{16}$	$4\frac{1}{2}$	8	9	$9\frac{3}{4}$	3
$\frac{61}{64}$	5	8	10	$10\frac{3}{8}$	3
$\frac{31}{32}$	5	8	10	$10\frac{3}{8}$	3
$\frac{63}{64}$	5	8	10	$10\frac{3}{8}$	3
1	5	8	10	$10\frac{3}{8}$	3
$1\frac{1}{32}$	5	8	10	$10\frac{3}{8}$	3
$1\frac{1}{16}$	5	8	10	$10\frac{3}{8}$	3
$1\frac{3}{32}$	$5\frac{1}{2}$	8	11	$10\frac{7}{8}$	3
$1\frac{1}{8}$	$5\frac{1}{2}$	8	11	$10\frac{7}{8}$	3
$1\frac{5}{32}$	$5\frac{1}{2}$	8	11	$10\frac{7}{8}$	3
$1\frac{3}{16}$	$5\frac{1}{2}$	8	11	$10\frac{7}{8}$	3
$1\frac{7}{32}$	6	8	12	$11\frac{3}{8}$	3
$1\frac{1}{4}$	6	10	12	$11\frac{3}{8}$	4
$1\frac{9}{32}$	6	10	12	$12\frac{1}{2}$	4
$1\frac{5}{16}$	6	10	12	$12\frac{1}{2}$	4
$1\frac{11}{32}$	$6\frac{1}{2}$	10	13	13	4
$1\frac{3}{8}$	$6\frac{1}{2}$	10	13	13	4
$1\frac{13}{32}$	$6\frac{1}{2}$	10	13	13	4
$1\frac{7}{16}$	$6\frac{1}{2}$	10	13	13	4
$1\frac{15}{32}$	$6\frac{5}{8}$*	10	$13\frac{1}{4}$	$13\frac{1}{2}$	4
$1\frac{1}{2}$	$6\frac{5}{8}$*	10	$13\frac{1}{4}$	$13\frac{1}{2}$	4
$1\frac{9}{16}$	$6\frac{5}{8}$*	10	$13\frac{1}{4}$	$13\frac{1}{2}$	4
$1\frac{17}{32}$	$6\frac{3}{4}$	10	$13\frac{1}{2}$	—	4
$1\frac{5}{8}$	$6\frac{3}{4}$*	10	$13\frac{1}{2}$	$13\frac{3}{4}$	4
$1\frac{21}{32}$	$6\frac{3}{4}$	10	$13\frac{1}{2}$	—	4
$1\frac{11}{16}$	$6\frac{3}{4}$*	10	$13\frac{1}{2}$	$13\frac{1}{4}$	4
$1\frac{23}{32}$	$6\frac{7}{8}$	10	$13\frac{3}{4}$	—	4
$1\frac{3}{4}$	$6\frac{7}{8}$*	10	$13\frac{3}{4}$	$13\frac{7}{8}$	4
$1\frac{25}{32}$	$6\frac{7}{8}$	10	$13\frac{1}{4}$	—	4
$1\frac{13}{16}$	$6\frac{7}{8}$*	10	$13\frac{3}{4}$	$13\frac{7}{8}$	4
$1\frac{27}{32}$	7	10	14	—	4
$1\frac{7}{8}$	7*	10	14	14	4
$1\frac{29}{32}$	7	10	14	—	4
$1\frac{15}{16}$	7*	10	14	14	4
$1\frac{31}{32}$	$7\frac{1}{8}$	12	$14\frac{1}{4}$	—	4
2	$7\frac{1}{8}$*	12	$14\frac{1}{4}$	$14\frac{1}{8}$	4

MICRO-SET EXPANDING REAMERS

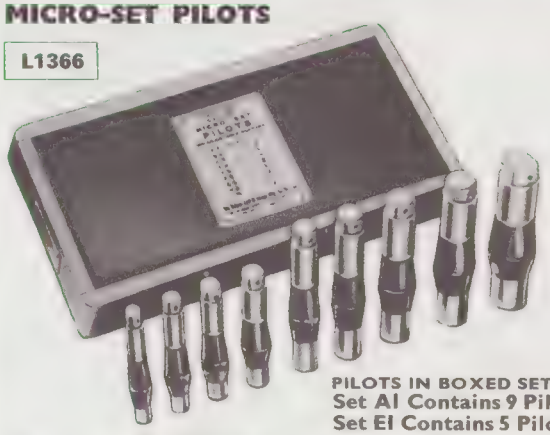
L1364 Standard Type



Code No.	Nominal Size	Expansion Range	
		Inches	M.M.
A8	$\frac{1}{4}$	$\frac{1}{4}$ - $\frac{9}{32}$	6.50- 7.00
A7	$\frac{9}{32}$	$\frac{9}{32}$ - $\frac{5}{16}$	7.00- 8.00
A6	$\frac{5}{16}$	$\frac{5}{16}$ - $\frac{11}{32}$	8.00- 8.75
A5	$\frac{11}{32}$	$\frac{11}{32}$ - $\frac{3}{8}$	8.75- 9.50
A4	$\frac{3}{8}$	$\frac{3}{8}$ - $\frac{13}{32}$	9.50-10.25
A3	$\frac{13}{32}$	$\frac{13}{32}$ - $\frac{7}{16}$	10.25-11.00
A2	$\frac{7}{16}$	$\frac{7}{16}$ - $\frac{15}{32}$	11.00-12.00
A	$\frac{1}{2}$	$\frac{15}{32}$ - $\frac{17}{32}$	12.00-13.50
B	$\frac{9}{16}$	$\frac{17}{32}$ - $\frac{19}{32}$	13.50-15.00
C	$\frac{5}{8}$	$\frac{19}{32}$ - $\frac{21}{32}$	15.00-16.75
D	$\frac{11}{16}$	$\frac{21}{32}$ - $\frac{23}{32}$	16.75-18.25
E	$\frac{3}{4}$	$\frac{23}{32}$ - $\frac{25}{32}$	18.25-19.75
F	$\frac{13}{16}$	$\frac{25}{32}$ - $\frac{27}{32}$	19.75-21.50
G	$\frac{7}{8}$	$\frac{27}{32}$ - $\frac{15}{16}$	21.50-23.75
H	1	$\frac{15}{16}$ - $1\frac{1}{16}$	23.75-27.00
I	$1\frac{1}{16}$	$1\frac{1}{16}$ - $1\frac{7}{16}$	27.00-30.25
J	$1\frac{1}{4}$	$1\frac{7}{16}$ - $1\frac{11}{32}$	30.25-34.25
K	$1\frac{11}{16}$	$1\frac{11}{32}$ - $1\frac{1}{2}$	34.25-38.00
L	$1\frac{1}{2}$	$1\frac{1}{2}$ - $1\frac{13}{16}$	38.00-46.00
M	2	$1\frac{13}{16}$ - $2\frac{3}{32}$	46.00-56.00
N	$2\frac{3}{32}$	$2\frac{7}{32}$ - $2\frac{3}{4}$	56.00-69.75
O	3	$2\frac{3}{4}$ - $3\frac{1}{32}$	69.75-85.00

MICRO-SET PILOTS

L1366



PILOTS IN BOXED SETS
Set A1 Contains 9 Pilots.
Set E1 Contains 5 Pilots.

Code No.	Use Reamer Size	Pilot Length	Code No.	Use Reamer Size	Pilot Length
A	$\frac{1}{2}$"	4"	G	$\frac{7}{8}$"	5"
B	$\frac{9}{16}$"	4"	H	1"	5"
C	$\frac{5}{8}$"	4"	I	$1\frac{1}{8}$"	5"
D	$\frac{11}{16}$"	4"	J	$1\frac{1}{4}$"	6"
E	$\frac{3}{4}$"	5"	K	$1\frac{7}{16}$"	6"
F	$\frac{13}{16}$"	5"	L	$1\frac{3}{4}$"	$6\frac{1}{2}$"

DIMENSIONS INCHES

L1365

EXPANDING REAMER SETS

Set No. 8 Matches
with Pilot Set A1

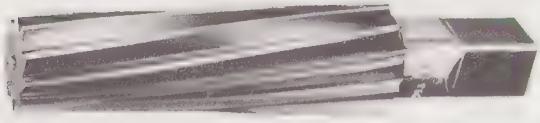
Code No.	Standard Reamer		Expansion Range	
	Quan.	Size	Inches	M.M.
Set 1	8	A4 to E	$\frac{3}{8}$-$\frac{23}{32}$	9.5 to 18.25
Set 2	8	A to H	$\frac{13}{32}$-$1\frac{1}{16}$	12 to 27
Set 2P*	8	A to H	$\frac{13}{32}$-$1\frac{1}{16}$	12 to 27
Set 3	11	A4 to H	$\frac{3}{8}$ -$1\frac{1}{16}$	9.5 to 27
Set 6	18	A8 to K	$\frac{1}{4}$-$1\frac{1}{2}$	6.5 to 38
Set 8	9	A to 1	$\frac{13}{32}$-$1\frac{7}{16}$	12 to 30.25

* Complete with pilots

L1367

MORSE TAPER SOCKET REAMERS

High Speed Steel
with Hand Shanks and Spiral Flute



Suitable for reaming holes to fit Morse Shanks of Twist Drills, Reamers, End Mills, etc.

Available in pairs consisting of Roughing Reamers and Finishing Reamers. (A Finishing Reamer is illustrated.)

Morse Taper No.	Overall Length	Flute Length	Diam. Small End	Diam. Large End	Calculated Taper per in. on Dia.	No. of Flutes
0	$3\frac{1}{4}$	$2\frac{1}{4}$	.250	.3671	.052050	6
1	$3\frac{1}{4}$	$2\frac{1}{2}$	.367	.4917	.049882	6
2	$4\frac{1}{2}$	3	.570	.7199	.049951	8
3	$5\frac{1}{2}$	$3\frac{3}{4}$	.775	.9632	.050196	8
4	$6\frac{7}{8}$	$4\frac{3}{8}$	1.017	1.2572	.051938	8
5	$8\frac{1}{2}$	6	1.471	1.7868	.052626	10

L1368

TAPER PIN REAMERS

High Speed Steel with Hand Shanks

LEFT HAND SPIRAL FLUTES — RIGHT HAND CUTTING
Taper 1 in 48 or $\frac{1}{4}$" per ft. included Taper.

Size	Size	Overall Length	Flute Length	Shank Diam.	No. of Flutes
$\frac{7}{32}$	5/0	$2\frac{1}{4}$	$1\frac{1}{4}$	0.095	4
$\frac{9}{64}$	4/0	$2\frac{1}{2}$	$1\frac{1}{2}$	0.111	4
$\frac{1}{8}$	3/0	$2\frac{3}{4}$	$1\frac{3}{4}$	0.127	4
$\frac{5}{64}$	2/0	$2\frac{7}{8}$	$1\frac{7}{8}$	0.143	4
$\frac{3}{16}$	0	3	2	0.158	4
$\frac{11}{64}$	1	$3\frac{1}{2}$	$2\frac{1}{4}$	0.174	4
$\frac{7}{32}$	2	4	$2\frac{3}{4}$	0.195	4
$\frac{15}{64}$	3	4	$2\frac{3}{4}$	0.220	4
$\frac{1}{4}$	4	$4\frac{1}{8}$	$3\frac{1}{8}$	0.253	4
$\frac{9}{32}$	5	$5\frac{1}{8}$	$4\frac{1}{8}$	0.292	4
$\frac{11}{32}$	6	6	$4\frac{1}{2}$	0.347	6
$\frac{13}{32}$	7	$7\frac{1}{2}$	$5\frac{1}{2}$	0.412	6
$\frac{1}{2}$	8	$8\frac{1}{4}$	$6\frac{1}{2}$	0.506	6
—	9	$8\frac{7}{8}$	$7\frac{1}{8}$	0.591	8
$\frac{3}{4}$	10	$10\frac{3}{4}$	$8\frac{3}{4}$	0.760	8
$\frac{7}{8}$	11	12	$9\frac{1}{2}$	0.885	8
—	12	$13\frac{3}{8}$	10	1.025	8

L1369 BRIDGE REAMERS WITH MORSE TAPER SHANKS

High Speed Steel

Normally supplied with left hand flutes. The long taper lead has an angle of approximately 5°.

Diam.	Tapered Flute Length	Parallel Flute Length	Overall Length	Morse Taper No.	Small End Diam.	No. of Flutes
1/4	1 7/16	1 15/16	6 3/8	1	1/8	4
5/16	1 7/16	2 5/16	6 3/4	1	7/32	4
3/8	1 13/16	2 5/16	7	1	7/32	4
7/16	2 1/8	2 1/4	7 9/16	1	1/4	4
1/2	2 1/2	2 5/8	8 9/16	1	9/32	4
9/16	2 5/8	2 1/2	9 1/8	2	5/16	4
5/8	3 1/4	2 5/8	9 7/8	2	11/32	4
11/16	3 9/16	3 9/16	11 1/2	3	3/8	5
3/4	3 9/16	3 13/16	12	3	7/16	5
13/16	3 9/16	3 13/16	12	3	1/2	5
7/8	3 9/16	3 13/16	12	3	9/16	5
15/16	3 9/16	3 13/16	12	3	5/8	5
1	3 9/16	3 13/16	12	3	11/16	5
1 1/16	3 9/16	3 13/16	12	3	3/4	5
1 1/8	3 9/16	3 13/16	12	3	13/16	5
1 3/16	3 9/16	3 13/16	12	3	7/8	5
1 1/4	3 9/16	3 13/16	13	4	15/16	6
1 5/16	3 9/16	3 13/16	13	4	1	6
1 3/8	3 9/16	3 13/16	13	4	1 1/16	6
1 7/16	3 9/16	3 13/16	13	4	1 1/8	6
1 1/2	3 9/16	3 13/16	13	4	1 3/16	6

Straight Flute Reamers also available

TOLERANCES: Reamer Diameter 1/4" to 9/16" +.005 −.000
Reamer Diameter 5/8" to 1 1/2" +.010 −.000

L1370 CHUCKING REAMERS

High Speed Steel

LEFT HAND SPIRAL FLUTES RIGHT HAND CUTTING

Available in either Rose or Plain

Designed for use in Turret and Capstan Lathes, and other machine Reaming operations. Supplied with a 45° bevel lead.

Diam.	Length Overall	Flute Length	Shank Length	Diam. Shank	Diam. of Body Clearance	No. of Flutes
1/4	5	1 1/8	1 1/2	1/4	7/32	6
5/16	5	1 1/4	1 1/2	5/16	9/32	6
3/8	6 1/8	1 1/2	1 3/4	3/8	11/32	6
7/16	6 1/4	1 1/2	1 3/4	7/16	3/8	6
1/2	7 1/2	1 3/4	2	1/2	7/16	6
9/16	7 1/2	1 3/4	2	9/16	1/2	6
5/8	8 1/4	2	2 1/4	5/8	9/16	6
11/16	8 1/4	2	2 1/4	11/16	5/8	8
3/4	8 1/2	2 1/4	2 3/8	3/4	11/16	8
13/16	8 1/2	2 1/4	2 3/8	13/16	11/16	8
7/8	8 3/4	2 1/2	2 1/2	7/8	3/4	8
15/16	8 3/4	2 1/2	2 1/2	15/16	13/16	8
1	9 1/4	2 3/4	2 5/8	1	7/8	8
1 1/16	9 1/4	2 3/4	2 5/8	1	15/16	8
1 1/8	10	2 7/8	2 3/4	1 1/8	1	8
1 13/16	10	2 7/8	2 3/4	1 1/8	1	8
1 1/4	10 1/2	3	2 7/8	1 1/4	1	10
1 5/16	10 1/4	3	2 7/8	1 1/4	1 1/16	10
1 3/8	10 1/2	3 1/8	3	1 3/8	1 1/8	10
1 7/16	10 1/2	3 1/8	3	1 3/8	1 1/4	10
1 1/2	10 3/4	3 1/4	3 1/8	1 1/2	1 1/4	10
1 5/8	11 1/2	3 3/8	3 1/4	1 5/8	1 1/4	10
1 3/4	11 1/2	3 1/2	3 3/8	1 3/4	1 3/8	10
1 7/8	12 1/4	3 5/8	3 1/2	1 7/8	1 1/2	10
2	12 1/2	3 3/4	3 5/8	2	1 5/8	12

DIMENSIONS INCHES

L1371 PERA MACHINE REAMERS

High Speed Steel

STRAIGHT FLUTES. RIGHT HAND CUTTING

5° Positive Radial Rake

Recommended for the production reaming of through holes where close tolerance and fine surface finish is required. This Reamer is capable of penetration rates up to six (6) times faster than conventional machine reamers.

Diam.	Overall Length	Flute Length	Type of Shank	No. of Flutes
7/16	3 9/16	2	S.S.	4
1/2	5 1/2	2	1 MT	4
17/32	5 1/2	2	1	4
9/32	5 1/4	2	1	4
17/32	5 1/4	2	1	4
5/16	5 1/4	2	1	4
21/64	5 7/8	2 1/2	1	4
11/32	5 7/8	2 1/2	1	4
23/64	5 7/8	2 1/2	1	4
3/8	5 7/8	2 1/2	1	4
25/64	5 7/8	2 1/2	1	4
13/32	5 7/8	2 1/2	1	4
27/64	5 7/8	2 1/2	1	4
7/16	5 7/8	2 1/2	1	4
29/64	6 1/2	3	1	4
1/2	6 1/2	3	1	4
17/32	6 1/2	3	1	4
9/16	6 1/2	3	1	4
19/32	7 3/4	3 1/2	2 MT	4
5/8	7 3/4	3 1/2	2	4
21/32	7 3/4	3 1/2	2	4
11/16	7 3/4	3 1/2	2	4
23/32	8 3/8	4	2	4
3/4	8 3/8	4	2	4
13/16	8 3/8	4	2	6
7/8	8 3/8	4 1/2	2	6
15/16	9 3/4	4 1/2	3	6
1	10 3/8	5	3	6
1 1/16	10 3/8	5	3	6
1 1/8	10 7/8	5 1/2	3	6
1 3/16	10 7/8	5 1/2	3	6
1 1/4	11 1/8	6	3	6
1 5/16	12 1/2	6	4	6
1 3/8	13	6 1/2	4	6
1 1/2	13 1/2	7	4	6

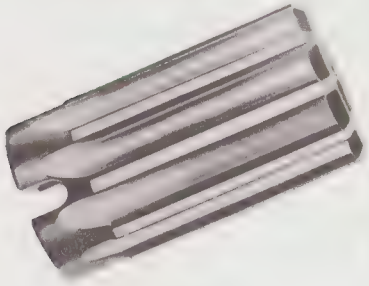
REAMER TOLERANCES

Hand — Machine — Chucking — Shell

Diameter Range	Tolerance
1/8" to 1/4"	+ .0003 + .0006
5/16" to 9/16"	+ .0004 + .0008
5/8" to 1 5/16"	+ .0005 + .0010
1" to 1 7/16"	+ .0006 + .0012
1 1/2" to 2"	+ .0007 + .0014
2 1/16" to 2 3/4"	+ .0008 + .0016

SHELL REAMERS — ROSE (Circular Ground) or PLAIN (Backed off to Small Land)

L1372 High Speed Steel with Taper Holes



Shell Reamers can be manufactured to your your own specification

DIMENSIONS INCHES

Diam.	Overall Length	Flute Length	Width of Driving Slot	Depth of Driving Slot	Diam. of Large End of Taper Hole	Fitting Arbor Size	No. of Flutes
1	2¾	2¼	3/16	11/32	3/8	A	10
1 1/16	2¾	2¼	3/16	11/32	3/8	A	10
1⅛	2¾	2¼	3/16	11/32	3/8	A	10
1 3/16	2¾	2¼	3/16	11/32	3/8	A	10
1¼	2¾	2¼	3/16	11/32	3/8	A	10
1 5/16	3	2⅜	¼	13/32	½	B	10
1⅜	3	2⅜	¼	13/32	½	B	10
1 7/16	3	2⅜	¼	13/32	½	B	10
1½	3	2⅜	¼	13/32	½	B	10
1 9/16	3	2⅜	¼	13/32	½	B	10
1⅝	3	2⅜	¼	13/32	½	B	10
1 11/16	3½	2½	¼	7/16	1	C	10
1¾	3½	3½	¼	7/16	1	C	10
1 13/16	3½	2½	¼	7/16	1	C	10
1⅞	3½	2½	¼	7/16	1	C	10
1 15/16	3½	2½	¼	7/16	1	C	10
2	3½	2½	¼	7/16	1	C	10
2¼	3½	3	5/16	17/32	1¼	D	10
2½	4	3¼	5/16	17/32	1¼	E	12

PLAIN MILLS High Speed Steel

25° RIGHT HAND SPIRAL FLUTES

L1373

DIMENSIONS INCHES

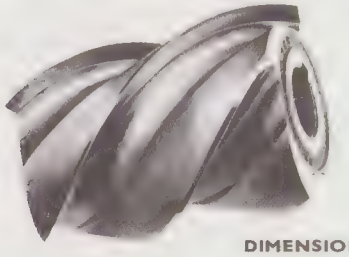
Diam.	Bore	Length of Face
2½	1	1, 1½, 2, 2½, 3, 3½, 4
3	1 or 1¼	1, 1½, 2, 2½, 3, 3½, 4, 5, 6
3½	1 or 1¼	2, 3, 4, 5, 6
4	1 or 1¼*	1½, 2, 2½, 3, 3½, 4, 5, 6, 8

*5, 6, 8 wide — 1¼ or 1½

HELICAL MILLING CUTTING

L1374 High Speed Steel

45° LEFT HAND SPIRAL FLUTES



DIMENSIONS INCHES

Diam.	Width	Bore	Teeth
3	2	1 or 1¼	4
	3	1 or 1¼	4
	4	1 or 1¼	4
	6	1 or 1¼	4
4	2	1 or 1¼	6
	3	1 or 1¼	6
	4	1 or 1¼	6
	6	1¼ or 1½	6
	8	1¼ or 1½	6

TOLERANCES	Dia.	Width	Bore
	+.045	+.030	+.00075
	.000	−.000	+.00025

SLOTTING CUTTERS

L1375

High Speed Steel

DIMENSIONS INCHES

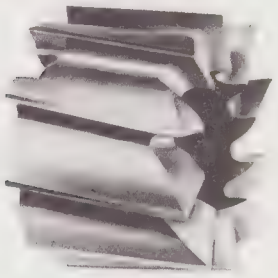
Diam. of Cutter	Diam. of Bore	Width of Cutter
2½	1	3/16, ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾, ⅞
3	1	3/16, ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾, ⅞
4	1	3/16, ¼, 5/16, ⅜, 7/16, ½, 9/16, ⅝, ¾, ⅞, 1
5	1 or 1¼	¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1
6	1 or 1¼	¼, 5/16, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1

SHELL END MILLING CUTTERS (New International Standard)

L1376 High Speed Steel

RIGHT HAND SPIRAL FLUTES.
RIGHT HAND CUTTING

For use on Stub Arbors intended to supersede face milling cutters, and the old style Shell End Mill.



DIMENSIONS INCHES

Diam.	Length Overall	Bore	Diam. of Recess	Length of Bore	Width of Driving Slot	Depth of Driving Slot	Teeth
1½	1	½	1 11/16	⅜	¼	5/32	8
1½	1⅛	½	1 11/16	⅜	¼	5/32	8
1⅞	1½	⅝	1 15/16	½	7/32	7/32	10
2	1⅜	⅝	1 15/16	½	7/32	7/32	10
2½	1½	1	1½	½	⅜	5/32	10
2½	1⅜	1	1⅜	½	⅜	7/32	10
2½	1⅜	1	1⅜	½	⅜	5/32	10
3	1½	1¼	1 5/16	½	½	5/32	10
3½	1⅜	1¼	1½	½	½	5/32	12
4	2¼	1½	2¼	1	⅜	⅜	12
4½	2¼	1½	2½	1	⅜	⅜	12
5	2¼	1½	3	1	⅜	⅜	12
5½	2¼	2	3½	1	⅜	7/16	12
6	2¼	2	3½	1	½	7/16	14

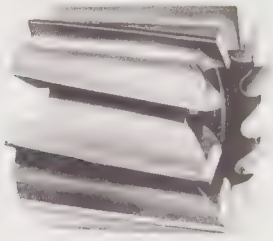
TOLERANCES

Diam.	Length Overall	Bore	Length of Bore	Width of Driving Slot	Depth Driving Slot
+.015	+.030	+.00075	+.015	+.005	+.015
−.000	−.000	+.00025	−.000	−.000	−.000

SHELL END MILLING CUTTERS (Old Standard)

L1377 High Speed Steel

RIGHT HAND SPIRAL FLUTES
RIGHT HAND CUTTING



DIMENSIONS INCHES

Diam.	Length Overall	Bore	Diam. of Recess	Length of Bore	Width of Driving Slot	Depth of Driving Slot	Teeth
1⅜	1⅜	⅜	1 1/16	1 1/16	⅜	¼	10
1⅞	1¾	⅜	1 1/16	1 1/16	⅜	¼	10
2	1⅜	⅜	1 1/16	1 1/16	⅜	¼	10
2⅛	1¾	⅜	1 1/16	1 13/16	⅜	¼	10
2¼	1⅜	⅜	1 1/16	1 1/16	⅜	¼	10
2½	2¼	1	1½	1¼	½	⅜	10
2⅝	2¼	1	1½	1¼	½	⅜	10
3	2¼	1	1½	1¼	½	⅜	10

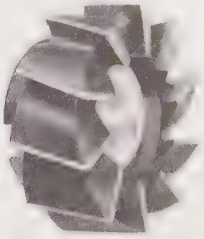
TOLERANCES

Diam.	Length Overall	Bore	Diam. of Recess	Length of Bore	Width of Driving Slot	Depth of Driving Slot
+.010	+.030	+.00075	+.030	+.015	+.007	+.015
−.000	−.000	+.00025	−.000	−.000	−.000	−.000

FACE MILLING CUTTERS (Old Standard)

L1378 High Speed Steel

RIGHT HAND SPIRAL FLUTES
RIGHT HAND CUTTING



DIMENSIONS INCHES

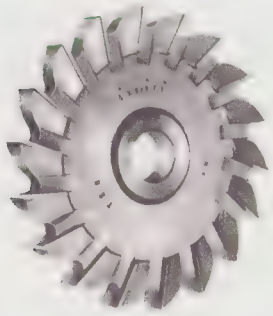
Diam.	Length Overall	Bore	Diam. of Recess	Length of Bore	Width of Driving Slot	Depth of Driving Slot	Teeth
1⅜	1½	⅜	1 1/16	⅜	⅜	¼	8
2	1½	⅜	1 1/16	⅜	⅜	¼	10
2½	1½	⅜	1⅜	⅜	⅜	¼	10
3	1 1/16	1⅛	1⅜	1½	½	⅜	10
4	1⅜	1⅛	2	1½	½	⅜	10
5	2	1½	3	1 5/16	⅝	7/16	12

TOLERANCES

Diam.	Length Overall	Bore	Diam. of Recess	Length of Bore	Width of Driving Slot	Depth of Driving Slot
+.045	+.030	+.00075	+.030	+.015	+.007	+.015
−.000	−.000	+.00025	−.000	−.000	−.000	−.000

SIDE AND FACE CUTTERS

L1379 High Speed Steel

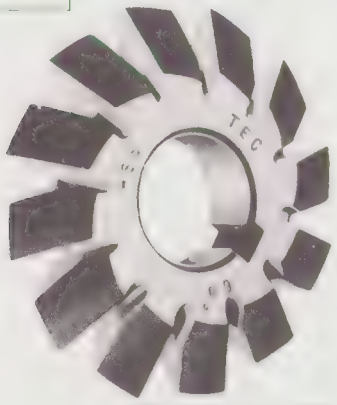


DIMENSIONS INCHES

Diam.	Width	Bore	Teeth	Diam.	Width	Bore	Teeth
2½	5/16	1	16	5	¼	1 or 1¼	20
	¼	1	16		5/16	1 or 1¼	20
	5/16	1	16		⅜	1 or 1¼	20
	⅜	1	12		7/16	1 or 1¼	16
	7/16	1	12		½	1 or 1¼	16
	½	1	12		⅝	1 or 1¼	16
	⅝	1	12		¾	1 or 1¼	16
	¾	1	12		⅞	1 or 1¼	16
3	5/16	1	16		1	1 or 1¼	16
	¼	1	16	6	¼	1 or 1¼	22
	5/16	1	16		5/16	1 or 1¼	22
	⅜	1	16		⅜	1 or 1¼	22
	7/16	1	12		7/16	1 or 1¼	18
	½	1	12		½	1 or 1¼	18
	⅝	1	12		⅝	1 or 1¼	18
	¾	1	12		¾	1 or 1¼	18
4	5/16	1	18		⅞	1 or 1¼	18
	¼	1	18		1	1 or 1¼	18
	5/16	1	18	8	¼	1 or 1¼	44
	⅜	1	18		5/16	1 or 1¼	44
	7/16	1	14		⅜	1 or 1¼	26
	½	1	14		½	1 or 1¼	22
	9/16	1	14		⅝	1 or 1¼	22
	⅝	1	14		¾	1 or 1¼	22
	¾	1	14		⅞	1 or 1¼	22
	⅞	1	14		1	1 or 1¼	22
	1	1	14				

ANGLE CUTTERS

L1380 High Speed Steel



DIMENSIONS INCHES

Diam.	Included Angle	Bore	Width	Diam.	Included Angle	Bore	Width
SINGLE ANGLE Right or left hand							
2¾	45°	1	¼	3	45°	1 or 1¼	⅜
2¾	50°	1	¼	3	50°	1 or 1¼	⅜
2¾	60°	1	¼	3	60°	1 or 1¼	⅜
2¾	70°	1	¼	3	70°	1 or 1¼	⅜
2¾	80°	1	¼	3	80°	1 or 1¼	⅜
DOUBLE ANGLE Right or left hand							
2¾	12° x 48°	1	⅜	3	12° x 48°	1 or 1¼	⅜
2¾	12° x 53°	1	⅜	3	12° x 53°	1 or 1¼	⅜
2¾	12° x 58°	1	⅜	3	12° x 58°	1 or 1¼	⅜
2¾	12° x 63°	1	⅜	3	12° x 63°	1 or 1¼	⅜
2¾	12° x 68°	1	⅜	3	12° x 68°	1 or 1¼	⅜
2¾	12° x 73°	1	⅜	3	12° x 73°	1 or 1¼	⅜
EQUAL ANGLE							
2¾	45°	1	½	3	45°	1 or 1¼	½
2¾	60°	1	½	3	60°	1 or 1¼	½
2¾	90°	1	½	3	90°	1 or 1¼	½

"T" SLOT CUTTERS Tapped Shank

L1381 High Speed Steel

DIMENSIONS INCHES

Diam. of Bolt	Diam. of Cutter	Width of Cutter	Morse Taper No.	Overall Length
¼	23/32	¼	2	3 7/16
5/16	29/32	5/16	2	3½
⅜	29/32	⅜	2	3½
7/16	31/32	7/16	2	4 1/16
½	1 5/32	½	2	4 1/16
⅝	1 11/32	⅝	3	5⅛
¾	1 13/32	¾	3	5 7/16
⅞	1 23/32	⅞	3	5½
1	1 31/32	1	4	7 1/16

CONCAVE CUTTERS

L1382 High Speed Steel

Diam. of Circle	Diam. of Cutter	Width	Bore	Diam. of Circle	Diam. of Cutter	Width	Bore
¼	2½	5/16	1	⅝	2¾	1 7/16	1
7/16	2½	⅜	1	¾	3	1⅛	1
½	2½	½	1	⅞	3½	1 7/16	1
7/16	2½	⅝	1	1	3½	1½	1
⅝	2½	¾	1	1⅛	4	1 11/16	1¼
7/16	2½	⅞	1	1¼	4	2⅛	1¼
¼	2½	1	1	1⅜	4¼	2 11/16	1¼
9/16	2¾	1 5/16	1	1½	4¼	2½	1¼

DIMENSIONS INCHES

CONVEX CUTTERS

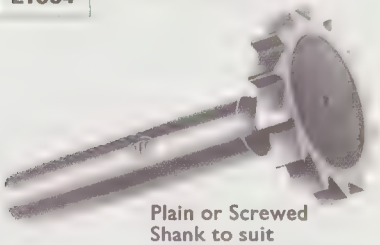
L1383 High Speed Steel

Diam. of Circle	Diam. of Cutter	Width	Bore	Diam. of Circle	Diam. of Cutter	Width	Bore
¼	2½	⅛	1	⅝	2¾	⅜	1
7/16	2½	3/16	1	¾	3	⅜	1
½	2½	¼	1	⅞	3½	7/16	1
7/16	2½	5/16	1	1	3½	½	1
⅝	2½	⅜	1	1⅛	4	½	1¼
7/16	2½	7/16	1	1¼	4	½	1¼
½	2½	½	1	1⅜	4¼	⅝	1¼
9/16	2¾	9/16	1	1½	4¼	⅝	1¼

DIMENSIONS INCHES

WOODRUFF CUTTERS

L1384 High Speed Steel



Plain or Screwed Shank to suit Clarkson, B.S.A. and similar Collett Chucks.

DIMENSIONS INCHES

Old Stan'd. No.	New Stan'd. No.	Diam.	Width	Overall Length	Old Stan'd. No.	New Stan'd. No.	Diam.	Width	
1	204	½	1/16	2	15	808	1	¼	2¾
2	304	½	3/32	2	B	1008	1	5/16	2¾
3	404	½	⅛	2	16	609	1⅛	5/16	2¾
4	305	⅝	3/32	2	18	809	1⅛	¼	2¾
5	405	⅝	⅛	2	C	1009	1⅛	5/16	2¾
6	505	⅝	3/32	2	21	810	1¼	¼	2¾
7	406	¾	⅛	2½	D	1010	1¼	5/16	2¾
8	506	¾	3/32	2½	E	1210	1¼	⅜	2¾
9	606	¾	5/32	2½	23	1011	1⅜	5/16	3
10	507	⅞	3/32	2½	F	1211	1⅜	⅜	3
11	607	⅞	5/32	2½	24	812	1½	¼	3
12	707	⅞	7/32	2½	25	1012	1½	5/16	3
A	807	⅞	¼	2½	G	1212	1½	⅜	3
13	608	1	5/32	2¾					

SPROCKET CUTTERS

L1385 Form relieved High Speed Steel

For milling Sprockets to British Standard Specification No. 228—1962

Pitch	Roller Diam.	Bore	Outside Diameter		
			Cutter No. 1	Cutter No. 2	Cutter No. 3
⅜	0.250	1	2¾	2¾	2¾
½	0.305	1	2¾	2¾	2¾
½	0.335	1	2¾	2¾	2¾
⅝	0.400	1	2¾	2¾	2¾
¾	0.475	1	3¼	3¼	3¼
1	0.625	1¼	4¼	4¼	4¼
1¼	0.750	1¼	4¼	4¼	4¾
1½	1.000	1¼	4¾	4¾	5

Each Pitch has three Cutters as follows:— **No. 1 Cutter will cut 9 to 12 Teeth**
No. 2 Cutter will cut 13 to 19 Teeth
No. 3 Cutter will cut 20 Teeth and over

DIMENSIONS INCHES

INVOLUTE CUTTERS

L1386 High Speed Steel

Diametral Pitch	Cutter Diam.	Bore	Diametral Pitch	Cutter Diam.	Bore
48	2¼	1	11	2⅜	1
40	2¼	1	10	2½	1
32	2¼	1	9	2½	1
30	2¼	1	8	2⅝	1
28	2¼	1	7	3	1
26	2¼	1	6	3⅛	1
24	2¼	1	5	3⅜	1
22	2¼	1	4	3½	1
20	2⅜	1	3½	4½	1¼
18	2⅜	1	3	4⅝	1¼
16	2½	1	2½	5½	1½
14	2½	1	2	5⅝	1½
12	2⅝	1			

DIMENSIONS INCHES

Involute Cutters have either 14½° or 20° pressure angles. Those with 14½° pressure angles are normally supplied; we can supply, also, cutters for stub tooth gears, bevel gears, or gears of module pitch.

INVOLUTE GEAR CUTTER NUMBERS

Eight Cutters are produced for each pitch — to cut gears

1. 135 teeth to a rack
2. 55 teeth to 134 teeth
3. 35 teeth to 54 teeth
4. 26 teeth to 34 teeth
5. 21 teeth to 25 teeth
6. 17 teeth to 20 teeth
7. 14 teeth to 16 teeth
8. 12 teeth to 13 teeth

SCREW SLOTTING CUTTERS

L1387 High Speed Steel

Diam.	Width		Bore	No. of Teeth	Diam.	Width		Bore	No. of Teeth
	Gauge No.	Inches				Gauge No.	Inches		
1¼	14	.064	⅜	90	2½	25	.018	⅜	60
	15	.057	⅜	90		26	.016	⅜	60
	16	.051	⅜	90		27	.014	⅜	60
	17	.045	⅜	90		28	.012	⅜	60
	18	.040	⅜	90		30	.010	⅜	60
	19	.035	⅜	90					
	20	.032	⅜	90	2¾	5	.182	1	44
	21	.028	⅜	90		6	.162	1	44
	22	.025	⅜	90		7	.144	1	44
	23	.023	⅜	90		8	.128	1	44
	24	.020	⅜	90		9	.114	1	44
	25	.018	⅜	90		10	.102	1	44
	26	.016	⅜	90		11	.091	1	44
	27	.014	⅜	90		12	.081	1	44
	28	.012	⅜	90		13	.072	1	44
	29	.011	⅜	90		14	.064	1	56
	30	.010	⅜	90		15	.057	1	56
						16	.051	1	56
2¼	11	.091	⅜	60		17	.045	1	56
	12	.081	⅜	60		18	.040	1	56
	13	.072	⅜	60		19	.035	1	56
	14	.064	⅜	60		20	.032	1	72
	15	.057	⅜	60		21	.028	1	72
	16	.051	⅜	60		22	.025	1	72
	17	.045	⅜	60		23	.023	1	72
	18	.040	⅜	60		24	.020	1	72
	19	.035	⅜	60		25	.018	1	72
	20	.032	⅜	60		26	.016	1	72
	21	.028	⅜	60		27	.014	1	72
	22	.025	⅜	60		28	.012	1	72
	23	.023	⅜	60		29	.011	1	72
	24	.020	⅜	60		30	.010	1	72

DIMENSIONS INCHES

HIGH PRODUCTION T.E.C. SERALOCK FACING CUTTERS

L1388 Carboloy Tipped

RIGHT HAND OR
LEFT HAND CUTTING

CAST IRON CUTTING	STEEL CUTTING
3/16″ Depth of Cut, ½″ x ¾″ Blade Cutter Diameter 4″ to 12″	⅛″ Depth of Cut ½″ x ¾″ Blade Cutter Diameter 4″ to 12″
⅜″ Depth of Cut ⅝″ x 1″ Blade Cutter Diameter 5″ to 16″	¼″ Depth of Cut ⅝″ x 1″ Blade Cutter Diameter 6″ to 16″
½″ Depth of Cut ¾″ x 1¼″ Blade Cutter Diameter 5″ to 16″	

SLITTING SAWS

L1389

High Speed Steel

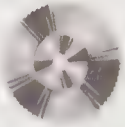
Diam.	Width	Bore	Teeth
2½	1/16	1	30
	3/32	1	30
	1/8	1	30
	5/32	1	24
	3/16	1	24
	7/32	1	24
	1/4	1	24
	5/16	1	24
	3/8	1	24
	7/16	1	24
3	1/16	1	36
	3/32	1	36
	1/8	1	36
	5/32	1	24
	3/16	1	24
	7/32	1	24
	1/4	1	24
	5/16	1	24
	3/8	1	24
	7/16	1	24
4	3/32	1	50
	1/8	1	50
	5/32	1	32
	3/16	1	32
	7/32	1	32
	1/4	1	32
	5/16	1	32
	3/8	1	32
	7/16	1	32
5	1/8	1	60
	3/16	1	60

Diam.	Width	Bore	Teeth
5	1/8	1	40
	3/16	1	40
	5/32	1	40
	7/32	1	40
	1/4	1	40
	9/32	1	40
	5/16	1	40
	3/8	1	40
6	5/32	1	70
	3/16	1	70
	1/8	1	48
	7/32	1	48
	9/32	1	48
	5/16	1	48
	11/32	1	48
	3/8	1	48
	7/16	1	48
	1/2	1	48
8	1/8	1	56
	5/32	1	56
	1/4	1	56
	9/32	1	56
	5/16	1	56
	1/2	1	56
10	5/32	1	70
	1/4	1	70
	9/32	1	70
	5/16	1	70
	1/2	1	70

CUTTING OFF SAWS

L1390

High Speed Steel



For prodution cutting off operations on cut-off machines.

Diam.	Width	Bore	Tooth Pitches and No. of teeth available	Machine Type
8	1/16	1	3/32 (268 teeth) 1/16 (134 teeth) 3/8 (66 teeth)	Taylor
	3/32	1	3/32 (268 teeth) 1/16 (134 teeth) 3/8 (66 teeth)	Taylor
	1/8	1	3/32 (268 teeth) 1/16 (134 teeth) 3/8 (66 teeth)	Taylor
10	3/32	1	3/32 (336 teeth) 1/16 (166 teeth) 3/8 (84 teeth)	Taylor
	1/8	1	3/32 (336 teeth) 1/16 (166 teeth) 3/8 (84 teeth)	Taylor
200MM	2MM	32MM	100 teeth 160 teeth	Omes
225MM	2MM	32MM	112 teeth 144 teeth 200 teeth	Omes
250MM	2MM	32MM	128 teeth 160 teeth 200 teeth 232 teeth	Omes
250MM	2MM	40MM	4MM (200 teeth) 6MM (130 teeth) 8MM (100 teeth)	Eisele
275MM	2MM	40MM	4MM (220 teeth) 6MM (144 teeth) 8MM (110 teeth)	Eisele
300MM	2MM	32MM	154 teeth 200 teeth 300 teeth 340 teeth	Omes

TOLERANCES

Diameter	Width	Bore
+.045	+.002	+.00075
−.000	−.002	+.00025

Cutting off saws suitable for aluminium are also available in sizes 6 x 1/16 x 1 and 8 x 3/32 x 1

Special Saws made to Customer Order

ALL DIMENSIONS INCHES EXCEPT WHERE M.M. ARE SPECIFIED

SCREWED SHANK SLOT DRILLS

DIMENSIONS INCHES

L1391

High Speed Steel

To suit Clarkson, B.S.A. Qualcut, and Similar Collet Chucks. R.H. Spiral Flutes, R.H. Cutting. All Sizes have Two Flutes

R.H. SPIRAL FLUTES, R.H. CUTTING

Also available

Screwed Shank, Long Series 1/8" to 2"

Plain Straight Shank Slot Drills Sizes 3/32" to 2"

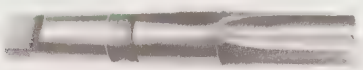
To Suit Standard Chucks and Collet Drives.

Cutter Diam.	Length of Cut	Shank Diam.	Overall Length	Cutter Diam.	Length of Cut	Shank Diam.	Overall Length
3/32	1/4	1/4	1 1/16	3/4	1 1/8	5/8	2 7/8
1/8	7/16	1/4	2	13/16	1 1/8	3/4	3 1/8
5/32	3/8	1/4	2 1/16	7/8	1 5/16	3/4	3 5/16
3/16	3/8	1/4	2 1/16	1 1/16	1 5/16	3/4	3 5/16
7/32	7/16	1/4	2 1/8	1	1 1/2	3/4	3 1/2
1/4	7/16	1/4	2 1/8	1 1/16	1 1/2	1	3 3/4
9/32	7/16	3/8	2 1/8	1 1/8	1 3/4	1	4
5/16	1/2	3/8	2 1/4	1 3/16	1 3/4	1	4
11/32	9/16	3/8	2 1/4	1 1/4	2	1	4 1/2
3/8	9/16	3/8	2 1/4	1 5/16	2	1	4 1/2
13/32	5/8	1/2	2 1/4	1 3/8	2 1/8	1	4 3/8
7/16	11/16	1/2	2 7/16	1 7/16	2 1/8	1	4 3/8
15/32	11/16	1/2	2 7/16	1 1/2	2 1/4	1	4 1/2
1/2	13/16	1/2	2 1/2	1 5/8	2 3/8	1	4 3/8
9/16	7/8	1/2	2 9/16	1 3/4	2 1/2	1	4 3/8
5/8	1	5/8	2 11/16	1 7/8	2 3/8	1	4 7/8
11/16	1 1/16	5/8	2 3/4	2	2 3/4	1	5

MORSE TAPER SHANK SLOT DRILLS

L1392

Tanged Shank High Speed Steel



Sizes up to 1/2" have Right Hand Spiral Flutes, Right Hand Cutting. Sizes over 1/2" have Straight Flutes, Right Hand Cutting. All Sizes have Two Flutes.

Cutter Diam.	Length of Cut	Morse Taper No.	Overall Length	Cutter Diam.	Length of Cut	Morse Taper No.	Overall Length
1/8	3/8	1	3 3/8	7/16	1 1/2	2	4 3/4
5/32	3/8	1	3 3/8	1/2	1 1/2	2	4 3/4
3/16	1/2	1	3 1/2	11/16	1 3/8	2	5
7/32	1/2	1	3 1/2	3/4	1 1/2	2	5 1/8
1/4	5/8	1	3 5/8	7/8	1 5/8	2	5 1/4
5/16	3/4	1	3 3/4	1	1 3/4	3	6 1/8
3/8	7/8	1	3 7/8	1 1/8	1 7/8	3	6 1/4
7/16	7/8	1	3 7/8	1 1/4	2	3	6 3/8
1/2	1	1	4	1 3/8	2 1/8	4	7 1/8
				1 1/2	2 1/2	4	7 3/4

SCREWED SHANK ENDMILLS

L1393 High Speed Steel

To suit Clarkson, B.S.A., Qualcut and similar Collet Chucks.

30° R.H. SPIRAL FLUTES, R.H. CUTTING

DIMENSIONS INCHES

Cutter Diam.	Length of Cut	Shank Diam.	Overall Length	No. of Flutes	Cutter Diam.	Length of Cut	Shank Diam.	Overall Length	No. of Flutes
3/32	1/4	1/4	2 3/32	2	11/16	1 1/8	3/4	3 3/8	4
1/8	3/8	1/4	2 1/8	4	3/4	1 1/2	3/4	3 1/2	4
3/32	3/8	1/4	2 1/4	4	13/16	1 1/8	3/4	3 3/8	4
7/64	1/2	1/4	2 1/4	4	7/8	1 1/8	3/4	3 3/8	6
7/32	1/2	1/4	2 1/4	4	13/16	1 3/8	3/4	3 3/8	6
1/4	3/8	1/4	2 3/8	4	1	1 1/2	3/4	3 3/4	6
3/32	3/4	3/8	2 1/2	4	1 1/16	1 1/2	1	4	6
7/64	3/4	3/8	2 1/2	4	1 1/8	1 7/8	1	4 1/8	6
11/32	7/8	3/8	2 3/8	4	1 3/16	1 7/8	1	4 1/8	6
3/8	7/8	3/8	2 3/8	4	1 1/4	2	1	4 1/2	6
13/32	7/8	1/2	2 3/8	4	1 5/16	2	1	4 1/2	6
7/16	7/8	1/2	2 3/8	4	1 3/8	2 1/8	1	4 3/8	6
15/32	1	1/2	2 3/4	4	1 7/16	2 1/8	1	4 3/8	6
1/2	1	1/2	2 3/8	4	1 1/2	2 1/4	1	4 3/4	6
9/16	1 1/8	1/2	2 7/8	4	1 5/8	2 3/8	1	4 3/4	8
5/8	1 1/4	5/8	3 1/4	4	1 3/4	2 1/2	1	4 3/4	8
					1 7/8	2 3/8	1	4 7/8	8
					2	2 3/4	1	5	8

Also available **Screwed Shank — Long Series 3/32"-2"**
Plain Straight Shank Endmills — 3/32"-2" Long Series, Short Series
To suit Standard Chucks and Collet Drives

MORSE TAPER SHANK ENDMILLS

L1394 Tapped Shank High Speed Steel

RIGHT HAND SPIRAL FLUTES
RIGHT HAND CUTTING

DIMENSIONS INCHES

Cutter Diam.	Length of Cut	Morse Taper No.	Overall Length	No. of Flutes	Cutter Diam.	Length of Cut	Morse Taper No.	Overall Length	No. of Flutes
1/4	3/8	2	3 13/16	4	7/8	1 3/8	2	4 7/8	6
5/16	3/8	2	3 13/16	4	1	1 1/2	3	5 1/8	6
3/8	7/16	2	4 1/16	4	1 1/8	1 7/8	3	5 1/2	6
7/16	7/8	2	4 1/16	4	1 1/4	2	3	5 7/8	6
1/2	1	2	4 1/16	4	1 3/8	2 1/8	4	7 1/8	6
9/16	1 1/4	2	4 3/8	4	1 1/2	2 1/4	4	7 1/2	6
5/8	1 1/2	2	4 1/2	4	1 3/8	2 3/8	4	7 3/8	8
11/16	1 3/8	2	4 3/8	4	1 1/2	2 1/2	4	7 1/2	8
3/4	1 1/4	2	4 1/2	4	1 5/8	2 3/8	4	7 3/8	8
13/16	1 3/8	2	4 7/8	4	2	2 1/4	4	7 1/4	8

TAPPED HOLE SIZES
No. 2 M.T. 3/8" Whit.
No. 3 M.T. 1/2" Whit.
No. 4 M.T. 5/8" Whit.

Also available
Tanged Shank.
Sizes 1/8" to 2"

VERSAMILL

L1395 Screwed Shank High Speed Steel

THREE FLUTE
CENTRE CUT
END MILL

To suit Clarkson, B.S.A., Qualcut and similar Collet Chucks.

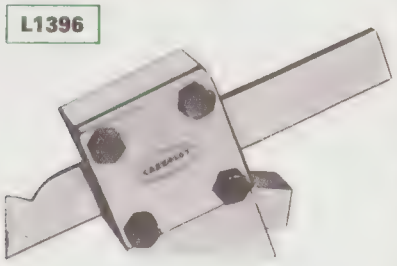
30° Right-hand Spiral Flute.
Right-hand Cutting.

DIMENSIONS INCHES

Diameter	Length of cut	Overall Length	Shank Diam.	Diameter	Length of cut	Overall Length	Shank Diam.
SHORT SERIES							
1/8	5/16	2	1/4	9/16	7/8	2 11/16	1/2
3/32	1/4	2 1/16	1/4	5/8	7/8	2 3/4	5/8
7/64	5/32	2 1/8	1/4	11/16	1 1/8	2 3/4	5/8
1/16	11/32	2 1/16	1/4	3/4	1	3 1/16	5/8
1/4	3/8	2 1/8	1/4	13/16	1	3 1/8	3/4
5/32	7/16	2 1/16	3/8	7/8	1	3 1/16	3/4
7/64	1/2	2 11/32	3/8	13/16	1	4 1/16	3/4
11/32	9/16	2 3/8	3/8	1	1 1/16	3 1/4	1
3/8	9/16	2 3/8	3/8	1 1/8	1 1/16	3 1/4	1
13/32	5/8	2 3/8	3/8	1 1/4	1 1/2	4	1
7/16	11/16	2 1/16	1/2	1 3/8	1 9/16	4 1/16	1
15/32	11/16	2 1/16	1/2	1 1/2	1 11/16	4 1/16	1
1/2	3/4	2 3/8	1/2				
LONG SERIES							
1/8	3/4	2 1/2	1/4				
5/32	1	2 3/4	1/4	11/16	2 3/4	4 11/16	5/8
3/16	1	2 3/4	1/4	3/4	3	4 13/16	5/8
1/4	1 1/2	3	1/4	13/16	3 1/2	5 3/8	3/4
5/16	1 3/8	3 1/8	3/8	7/8	3 1/2	5 3/8	3/4
3/8	1 1/2	3 1/4	3/8	13/16	3 3/8	6	3/4
7/16	1 3/4	3 1/2	1/2	1	3 7/8	6 1/4	1
1/2	2	3 1/4	1/2	1 1/8	4	6 1/2	1
9/16	2 1/4	4	1/2	1 1/4	4	6 1/4	1
5/8	2 1/2	4 3/16	5/8	1 1/2	4	6 1/4	1

CARBOLOY SPECIAL PARTING TOOLS

L1396



HOLDER

Available in two sizes: Size No. 0 to suit 6" and 7" centre lathes. Size No. 1 for larger size lathes.

PARTING TOOL CUTTER

Three sizes available: $\frac{1}{8}$", $\frac{3}{16}$", and $\frac{1}{4}$" interchangeable, and can be used in either holder.

PARTING OFF TOOLS — Straight Shank

L1397 RIGID TYPE

No.	Shank	Cutter
19	$\frac{7}{16} \times \frac{3}{4} \times 4\frac{1}{2}$	$\frac{3}{32} \times \frac{1}{2}$
20	$\frac{3}{8} \times \frac{7}{8} \times 5$	$\frac{3}{32} \times \frac{3}{8}$
21	$\frac{1}{2} \times 1\frac{1}{8} \times 6$	$\frac{1}{8} \times \frac{3}{4}$
22	$\frac{5}{8} \times 1\frac{3}{8} \times 7$	$\frac{1}{8} \times \frac{7}{8}$
23	$\frac{3}{4} \times 1\frac{5}{8} \times 8$	$\frac{3}{16} \times 1$

L1398 SPRING TYPE

No.	Shank	Cutter
S-19	$\frac{7}{16} \times \frac{3}{4} \times 4\frac{1}{2}$	$\frac{3}{32} \times \frac{1}{2}$
S-20	$\frac{3}{8} \times \frac{7}{8} \times 5\frac{1}{2}$	$\frac{3}{32} \times \frac{3}{8}$
S-21	$\frac{1}{2} \times 1\frac{1}{8} \times 6\frac{5}{8}$	$\frac{1}{8} \times \frac{3}{4}$
S-22	$\frac{5}{8} \times 1\frac{3}{8} \times 7\frac{1}{2}$	$\frac{1}{8} \times \frac{7}{8}$
S-23	$\frac{3}{4} \times 1\frac{5}{8} \times 8\frac{7}{8}$	$\frac{3}{16} \times 1$

KNURLING TOOL HOLDERS

L1339 SINGLE KNURL TYPE

Tool Number	Size of Holder	Knurls				
		Type	Diam.	Width	Width of Cut	Bore
001	$4 \times \frac{1}{2} \times \frac{1}{2}$	Cast Steel	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{7}{32}$	$\frac{1}{4}$
002	$4 \times \frac{1}{2} \times \frac{1}{2}$	H.S.S.	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{7}{32}$	$\frac{1}{4}$
005	100 x 13 x 13 mm	Cast Steel	19 mm	8 mm	8 mm	6 mm

L1400 WITH PIVOTED HEAD
Self-adjusting to the work

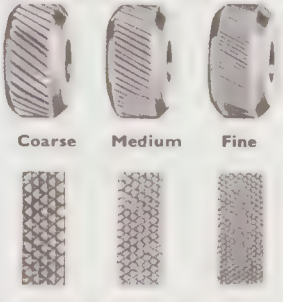
Tool Number	Size of Holder	Knurls				
		Type	Diam.	Width	Width of Cut	Bore
001	$5\frac{7}{32} \times \frac{13}{16} \times \frac{3}{8}$	Cast Steel	$\frac{5}{8}$	$\frac{5}{16}$	$\frac{9}{32}$	$\frac{1}{4}$
002	$5\frac{7}{32} \times \frac{13}{16} \times \frac{3}{8}$	H.S.S.	$\frac{5}{8}$	$\frac{5}{16}$	$\frac{9}{32}$	$\frac{1}{4}$
*501	$4\frac{7}{32} \times \frac{33}{64} \times \frac{3}{8}$	Cast Steel	$\frac{5}{8}$	$\frac{3}{16}$	$\frac{9}{32}$	$\frac{1}{4}$
*502	$4\frac{7}{32} \times \frac{33}{64} \times \frac{3}{8}$	H.S.S.	$\frac{5}{8}$	$\frac{3}{16}$	$\frac{9}{32}$	$\frac{1}{4}$

*Suitable for "Boxford" and four-way toolposts.

L1401 REVOLVING HEAD TYPES

Tool Number	Size of Holder	Knurls				
		Type	Diam.	Width	Width of Cut	Bore
001	$\frac{1}{2} \times 1\frac{1}{8} \times 6\frac{1}{2}$	Cast Steel	$\frac{3}{4}$	$\frac{3}{8}$	$\frac{11}{32}$	$\frac{1}{4}$
002	$\frac{1}{2} \times 1\frac{1}{8} \times 6\frac{1}{2}$	H.S.S.	$\frac{3}{4}$	$\frac{3}{8}$	$\frac{11}{32}$	$\frac{1}{4}$
005	13 x 29 x 165 mm	Cast Steel	19 mm	8 mm	8 mm	6 mm

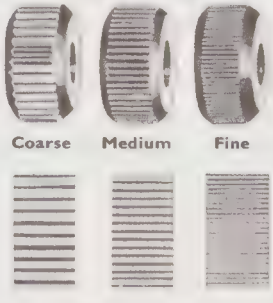
DIAMOND PATTERN



Coarse Medium Fine

Knurling produced by pairs of right and left-hand Diamond Standard Face Knurls.

STRAIGHT LINE PATTERN



Coarse Medium Fine

Knurling produced by pairs of Straight Line Full Face Knurls.

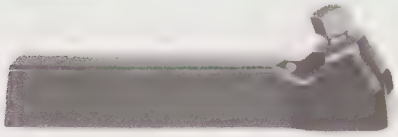
L1402 BORING BARS
Cutter Bar at 45° and 90°

Tool Number	Shank	Bar Diam.	Cutter
005	$\frac{3}{8} \times \frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{16}$
006	$\frac{11}{16} \times \frac{11}{16}$	$\frac{7}{16}$	$\frac{3}{16}$
007	$\frac{3}{4} \times \frac{3}{4}$	$\frac{1}{2}$	$\frac{3}{16}$
108	$\frac{7}{8} \times \frac{7}{8}$	$\frac{3}{8}$	$\frac{1}{4}$
109	1×1	$\frac{1}{2}$	$\frac{1}{4}$
110	$1\frac{1}{4} \times 1\frac{1}{4}$	$\frac{13}{16}$	$\frac{5}{16}$
111	$1\frac{1}{2} \times 1\frac{1}{2}$	$1\frac{1}{8}$	$\frac{3}{8}$
112	$1\frac{3}{4} \times 1\frac{3}{4}$	$1\frac{5}{16}$	$\frac{7}{16}$
113	2×2	$1\frac{1}{2}$	$\frac{1}{2}$
114	$2\frac{3}{8} \times 2\frac{3}{8}$	$1\frac{3}{4}$	$\frac{5}{8}$
115	$2\frac{7}{8} \times 2\frac{7}{8}$	$2\frac{1}{4}$	$\frac{3}{4}$

ALL DIMENSIONS INCHES EXCEPT WHERE M.M. ARE SPECIFIED

LATHE TOOL HOLDERS

L1404 HIGH CENTRE



L1405 LOW CENTRE (Drop Head)

Tool Number Straight	Tool Number *Left-Hand Offset	Tool Number †Right-Hand Offset	Size of Holder	Size of Tool Bit Square	Nom. Height from Bottom of Shank to Tool Bit Point
000-S	000-L	000-R	$\frac{5}{16}$ x $\frac{1}{2}$ x 4	$\frac{3}{16}$	$\frac{1}{2}$
00-S	00-L	00-R	$\frac{5}{16}$ x $\frac{1}{4}$ x 4½	$\frac{3}{16}$	$\frac{11}{16}$
0-S	0-L	0-R	$\frac{3}{8}$ x $\frac{7}{8}$ x 5	$\frac{1}{4}$	$\frac{13}{16}$
1-S	1-L	1-R	$\frac{1}{2}$ x 1$\frac{1}{8}$ x 6	$\frac{5}{16}$	1$\frac{1}{16}$
2-S	2-L	2-R	$\frac{5}{8}$ x 1$\frac{3}{8}$ x 7	$\frac{3}{8}$	1$\frac{1}{4}$
3-S	3-L	3-R	$\frac{3}{4}$ x 1$\frac{5}{8}$ x 8	$\frac{7}{16}$	1$\frac{15}{32}$
4-S	4-L	4-R	$\frac{7}{8}$ x 1$\frac{3}{4}$ x 9	$\frac{1}{2}$	1$\frac{21}{32}$
5-S	5-L	5-R	1 x 2 x 11	$\frac{5}{8}$	2
6-S	6-L	6-R	1$\frac{1}{4}$ x 2$\frac{1}{4}$ x 13	$\frac{3}{4}$	2$\frac{7}{16}$
7-S	7-L	7-R	1$\frac{1}{2}$ x 2$\frac{1}{2}$ x 16	$\frac{7}{8}$	2$\frac{13}{16}$
750-S	750-L	750-R	1$\frac{5}{8}$ x 2$\frac{3}{4}$ x 18	1	3$\frac{1}{16}$
800-S	800-L	800-R	1$\frac{3}{4}$ x 3 x 20	1$\frac{1}{8}$	3$\frac{3}{8}$
100-S	100-L	100-R	$\frac{1}{2}$ x $\frac{5}{8}$ x 6	$\frac{3}{16}$	$\frac{9}{16}$
101-S	101-L	101-R	$\frac{5}{8}$ x $\frac{3}{4}$ x 7½	$\frac{1}{4}$	$\frac{11}{16}$
201-S	201-L	201-R	$\frac{3}{4}$ x $\frac{7}{8}$ x 8½	$\frac{3}{16}$	$\frac{13}{16}$
102-S	102-L	102-R	$\frac{7}{8}$ x 1 x 9½	$\frac{3}{8}$	$\frac{15}{16}$
301-S	301-L	301-R	1 x 1$\frac{1}{8}$ x 10½	$\frac{7}{16}$	1$\frac{1}{16}$
103-S	103-L	103-R	1$\frac{1}{8}$ x 1$\frac{1}{4}$ x 11½	$\frac{1}{2}$	1$\frac{3}{16}$
104-S	104-L	104-R	1$\frac{3}{8}$ x 1$\frac{1}{2}$ x 13½	$\frac{5}{8}$	1$\frac{5}{16}$
105-S	105-L	105-R	1$\frac{3}{8}$ x 1$\frac{3}{4}$ x 15½	$\frac{3}{4}$	1$\frac{1}{2}$
106-S	106-L	106-R	1$\frac{7}{8}$ x 2 x 17½	$\frac{7}{8}$	1$\frac{3}{4}$
107-S	107-L	107-R	2$\frac{1}{8}$ x 2$\frac{1}{4}$ x 19½	1	2

*Left-Hand Tools offset to the right. †Right-Hand Tools offset to the left.

DIMENSIONS INCHES

L1406 SILVER STEEL

ROUND — 1 Metre Length

Oil Hardening or Water Hardening Qualities

Sizes: Fractional $\frac{3}{64}$" to 1$\frac{1}{4}$" diameter.

L1407 GROUND FLAT STOCK

Precision Ground Annealed Tool Steel

Length 18". Sizes: Thickness $\frac{1}{32}$"-$\frac{1}{2}$"
Width 1"-6"

HIGH SPEED STEEL TOOL BITS

L1408 HARDENED AND GROUND READY FOR USE

"TECMAX" for general use
"SUPERMAX" for general and heavy duty use

TECMAX QUALITY

Squares	Lengths	Rounds	Lengths
$\frac{3}{16}$	2½ & 3	$\frac{3}{32}$	2 & 3
$\frac{1}{4}$	2½	$\frac{1}{8}$	3 & 4
$\frac{5}{16}$	2½	$\frac{5}{32}$	3 & 4
$\frac{3}{8}$	3	$\frac{3}{16}$	3 & 4
$\frac{7}{16}$	3½	$\frac{7}{32}$	3 & 4
$\frac{1}{2}$	4 & 6	$\frac{1}{4}$	3 & 4
$\frac{5}{8}$	4½	$\frac{5}{16}$	3 & 4
$\frac{3}{4}$	5	$\frac{3}{8}$	3 & 4
1	7	$\frac{7}{16}$	3 & 4
		$\frac{1}{2}$	3 & 4

SUPERMAX QUALITY

Squares	Lengths
$\frac{3}{16}$	2½ & 3
$\frac{1}{4}$	2½, 3, 4 & 8
$\frac{5}{16}$	2½, 3, 4 & 8
$\frac{3}{8}$	3, 4, 6 & 8
$\frac{7}{16}$	3½, & 8
$\frac{1}{2}$	4, 6 & 8
$\frac{5}{8}$	4½ & 6
$\frac{3}{4}$	5
$\frac{7}{8}$	6
1	6 & 7

Rounds	Lengths
$\frac{1}{8}$	3
$\frac{3}{16}$	4
$\frac{1}{4}$	3 & 4
$\frac{5}{16}$	4 & 6
$\frac{3}{8}$	4 & 6
$\frac{1}{2}$	6

Bevels		
Width	Thickness	Length
$\frac{1}{2}$	$\frac{3}{32}$	4½
$\frac{5}{8}$	$\frac{3}{32}$	5
$\frac{3}{4}$	$\frac{1}{8}$	6
$\frac{7}{8}$	$\frac{1}{8}$	6
$\frac{7}{8}$	$\frac{1}{8}$	7
1	$\frac{3}{16}$	8

LIVE LATHE CENTRES

L1409

Morse Taper Shank
1, 2, 3, 4, 5, 6

LIVE PIPE CENTRES

L1410

Morse Taper 2, 3, 4, 5
Cone Diameter 3" 4" 5" 6"

LATHE CENTRES

L1411 60° Angle-Morse Taper

Morse Taper No.	Length Overall
1	2$\frac{7}{8}$
2	3$\frac{11}{16}$
3	4$\frac{11}{16}$
4	5$\frac{13}{16}$
5	7$\frac{3}{4}$
6	10$\frac{3}{4}$

CARBOLOY TIPPED LATHE AND GRINDER CENTRES

L1412

Available with
1, 2, 3, 4, 5, 6
Morse Taper — Full or Half Centres.

DIMENSIONS INCHES

AUSTRA MACHINE TOOL ACCESSORIES

L1413 SUPER-LOK COLLET CHUCK
FOR SCREWED SHANK TOOLS

Shank Sizes

No. 40 Series
No. 30 Series
No. 4 Morse Taper
No. 3 Morse Taper
Screwed Collets $\frac{1}{4}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$"

L1414 COLLET CHUCKS

For Extension Adaptors, Lathes, Automatics, Drilling, Grinding, Milling, Boring Machines.

Sizes: Complete range of Chucks, Collets and Short or Extension Adaptors for M.T. Shanks available.

Shank	Taper
50 Series	50 Series 40 series
40 Series	30 Series 4 M.T. 3 M.T.
20 Series	2 M.T.

L1415 QUICK-CHANGE ADAPTORS

Shank Size	Inside Taper
40 Series	30 Series
50 Series	30 Series

L1416 REDUCING ADAPTORS

Takes cutters with tapped or tang shanks.
Sizes: Available short or long series with machine taper.

Shank Size	International Taper
50 Series	40, 5 M.T., 4 M.T., 3 M.T., 2 M.T.
40 Series	30, 4 M.T., 3 M.T., 2 M.T., 1 M.T.
30 Series	3 M.T., 2 M.T., I.M.T.

L1417 BORING HEADS

ADJUSTABLE SLIDE GIB WITH LOCK

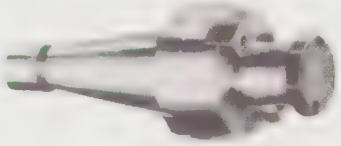
Shank Size
50 Series
40 Series
30 Series
4 Morse Taper
3 Morse Taper

L1418 SUPER HOLDERS
FOR FLATTED SHANK TOOLING

Shank Size	Bore
50 Series	$1\frac{1}{4}$", 2"
40 Series	$1\frac{1}{4}$"

Also Available, Bolt-on Type

L1419 SHELL MILL AND FACE CUT ARBORS



Available with 50 Series, 40 Series or 30 Series Shank to Suit Cutters
$\frac{3}{4}$" diam. x $\frac{3}{4}$" to 2" diam. x 1"

L1420 UNIVERSAL FLOATING TOOLHOLDER

For Reaming and tapping holes on Lathes, Drilling and Milling Machines.
Holds all hand, machine and chucking reamers and taps.

Size	Shank
1	No. 3 M.T.
1	1" diam.
$1\frac{1}{2}$	No. 4 M.T.
$1\frac{1}{2}$	$1\frac{1}{2}$" diam.

L1421 SUPER FACER

For fast metal removal and superior finish from Milling, Boring Machine or Lathe.
Capacity up to 3" wide cut.

Sizes: Range from $\frac{5}{8}$" to $2\frac{1}{2}$" diameter. Solid Carbide inserts to suit.

L1422 COUNTERSINK CUTTERS

Included Angle	Cutter Diameter
90°	.229″ to 1¼″
60°	.338″ to 1¼″
82°	.395″ to 1½″
120°	.260″ to .760″

L1423 SUPER COUNTERBORES

FOR SOCKET CAP SCREWS

Cap Screw Size
$\frac{3}{16}$″, $\frac{1}{4}$″, $\frac{5}{16}$″, $\frac{3}{8}$″, $\frac{7}{16}$″, $\frac{1}{2}$″

L1424 SUPER DRILLS

For counterboring, core drilling and spot facing.

No. 1	$\frac{1}{4}$″ to $\frac{9}{16}$″
No. 2	$\frac{1}{2}$″ to 1¼″
No. 3	1″ to 2″

Cap Screw Counterbore Sizes $\frac{3}{16}$″ to 1″

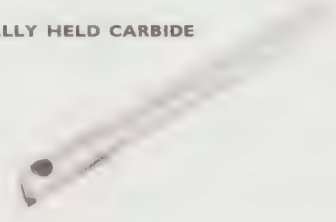
L1425 CONE LOCK DRILL JIGS

No. 1	Capacity 2.50″- 3.75″
No. 2	Capacity 3.00″- 4.25″
No. 3	Capacity 4.00″- 5.25″
No. 4	Capacity 9.00″-10.88″
No. 5	Capacity 9.00″-10.88″

L1426 BORING BARS

MECHANICALLY HELD CARBIDE

Shank Size ½″-2⅛″
Length 7″-14″



L1427 MILLING ARBOR SPACERS

Combination distance pieces — accurate spacing of Milling Cutters.

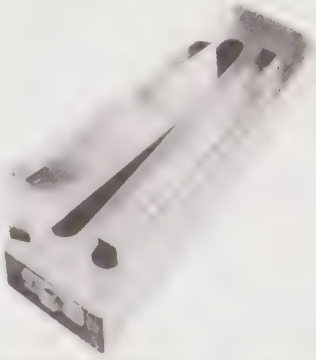
Standard sizes: 1″ and 1¼″ bore.
Width: $\frac{1}{32}$″ to 1½″

L1428 ENGINEER'S STEEL PARALLEL

Superfine accuracy for precision in job set-up and inspection.

2 Grades —

Grade B to BS906
Grade C
Sizes: Thickness ¼″-2″
Width ½″-4″
Length 4″-16″



L1429 TEE SLOT VICE CLAMPS

For Milling, Shaping, Planing, Surface Grinding.

Nominal Width of Slot	$\frac{7}{16}$″, $\frac{9}{16}$″, $\frac{11}{16}$″, $\frac{13}{16}$″, 1$\frac{1}{16}$″

L1430 TAP EXTRACTORS

"Walton" Tap Extractors are available for all standard taps, No. 4 to 1½″ in 2, 3, 4 and 6 flute styles; for all Pipe Taps, ⅛″ to 1″ in 4 and 5 flute styles; and for all Helical Coil "S.T.I." Taps No. 4 to ⅝″ in 2, 3 and 4 flute styles.

Available in six Standard Sets of from 6 to 15 extractors per set—packed in metal box.

L1431 VERTICAL QUICK CLAMP

Suitable for ½″ and ⅝″ Tee Slots

Horizontal grip, adjustable from 2¼″ (centre to centre) 5½″ height above table, from ¾″ to 4½″.

CARBOLOY CEMENTED CARBIDE

GRADE SELECTION

There are two major groups of Carboloy cemented carbides:
Straight Tungsten Carbides (so-called cast iron grades). Generally used for machining cast iron, aluminium, brass, bronze, copper, other non-ferrous metals and non-metallic materials such as plastics, fibres, etc.
Combined Carbides (so-called steel cutting grades). Used for machining practically all kinds of steel. The combined carbides are basically tungsten carbide with titanium carbide, tantalum carbide, or both added in small percentages.

Standard Grades of Carboloy

The great majority of carbide machining applications can be satisfactorily done with a select few "Standard" grades of Carboloy and are recommended unless there are definite indications that a "Special" grade is required. "Standard" grades: For cast iron and non-ferrous materials—44A, 883; for cutting steel—78, 78B.

Special Grades of Carboloy

Use these "Special" grades of Carboloy cemented carbides only if machining applications fall into the specific classifications listed. Otherwise the "Standard" grades should be used. "Special" grades of Carboloy comprise: For cutting all materials other than steel—999, 905, 55A.

Premium Grades for Cutting Steel

The "300" series of steel cutting grades.

STANDARD GRADES FOR CUTTING STEEL

Grade 831 **For Precision Finishing.**
Manufactured specifically for precision boring of steel parts—high production, close tolerance work. Extreme care must be used in brazing and grinding.

Grade 78 **For Average Finishing and Light Roughing.**
For finishing large steel castings and forgings that have already been roughed out. Very good for combination roughing and finishing cuts on bar stock and tubing where little shock is involved. Satisfactorily handled with normal brazing and grinding technique.

Grade 78B **For Roughing and General Purpose Machining.**
Best grade for average roughing and semi-finishing of steel castings and forgings.

This grade is easy to braze and grind.

Grade 78C **For Heavy Duty and Interrupted Cuts.**

PREMIUM GRADES FOR CUTTING STEEL

Grade 350 **Semi-Roughing and Finishing.**
A grade designed with excellent wear resistance as well as toughness by means of unique grain structure and rigidity built into the material. This rigidity enables grade 350 to resist high temperatures encountered during high speed machining operations.

HIGH CUTTING TEMPERATURE RESISTANCE. MEDIUM WEAR RESISTANCE.

Grade 370 **Heavy Duty Roughing.**
A grade that combines toughness and good wear resistance, but designed for heavy duty machining, roughing and interrupted cuts. This grade with unique grain structure and rigidity built into the material, will resist high temperatures encountered in heavy duty machining.

EXCELLENT RESISTANCE TO CUTTING TEMPERATURE, SHOCK AND CUTTING LOAD. MEDIUM WEAR RESISTANCE.

FOR CUTTING ALL MATERIALS OTHER THAN STEEL

Grade 999 **For Precision Finishing.**
For light finishing cuts such as precision boring of aluminium or brass. Can be used on cast iron and plastics.
Brazing and grinding, use care.

Grade 905 **For Average Finishing.**
Normally used where considerable stock is removed with finishing cuts and where machine conditions are not perfect.
Not hard to fabricate if good brazing and grinding techniques are used.

Grade 883 **For General Purpose Roughing and Finishing.**
For light roughing and general purpose finishing.

Grade 44A **For Roughing of Cast Iron.**
For heavy rough cuts on irregular castings, or for heavy cuts on brass and aluminium where work piece or machine condition are not good.
This grade is easy to braze and grind.

Grade 55A **For Extreme Heavy Duty Cutting—Shock Resistant.**
Originally developed for extremely rugged cutting applications. This grade is used extensively for shock resistant applications such as stone chisels, coal mining bits and drills.

SPECIAL APPLICATIONS

Grade 779 A special grade for wire, bar and tube drawing dies.

Grade 55B Used for medium impact service such as dies for heading small bolts, rivets.
Also for lamination punches.

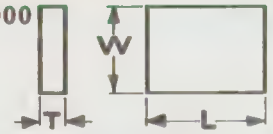
Grade 190 Used for heavy duty heading dies for large bolts.

Grade 55A Used for dies for punch presses, extrusion dies for boltmaking machines, and wear-resisting applications where shock is encountered, also for file cutting chisels, lamination dies.

Grade 44A Used for wear-resisting applications light shock.

Grade 883 High resistance to abrasion for applications where no shock is encountered but extreme resistance to wear is required.

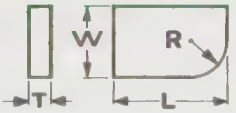
STYLE 1000



SUPPLIED WITHOUT CLEARANCE

DIMENSIONS			Blank Order No.
Thickness (T)	Width (W)	Length (L)	
	1/8	5/8	1010
1/16	3/16	1/4	1020
	1/4*	1/4	1025
	1/4	5/16	1030
	1/8	1/2	1035
	5/32	3/8	1036
	3/16	5/16	1040
	3/16	1/2	1050
	1/4	3/8	1060
3/32	1/4	1/2	1070
	1/16*	5/16	1075
	5/16	3/8†	1080
	3/8	3/8	1090
	3/8	1/2†	1100
	7/16	1/2	1105
	1/8*	7/16	1106
	3/16	3/4	1110
	1/4	1/2	1120
	1/4	3/8	1130
1/8	1/4	3/4	1140
	5/16	7/16	1150
	5/16	1/2	1160
	5/16	3/8	1170
	3/8	1 1/2†	1180
	3/8	3/4	1190
	1/2	1/2	1200
	1/2	3/4	1210
	3/4	3/4	1215
	3/8	9/16	1220
	3/8	3/4	1230
3/32	7/16	5/8†	1235
	3/8	3/8	1240
	1/4	3/8	1245
	5/16	7/16	1250
	5/16	5/8	1260
	3/8	1/2	1270
	3/8	5/8	1280
3/16	3/8	3/4	1290
	7/16	3/8	1300
	7/16	1 3/16	1310
	1/2	1/2	1320
	1/2	3/4†	1330
	3/4	3/4	1340
	3/8	9/16	1350
	3/8	3/4	1360
	7/16	3/8	1370
1/4	1/2	3/4†	1380
	9/16	1†	1390
	3/8	3/8	1400
	3/4	3/4	1405
	3/4	1	1410
	7/16	5/8	1420
	7/16	1 3/16	1430
	1/2	3/4	1440
	1/2	1	1450
	5/8	1†	1460
5/16	3/8	1 1/4†	1465
	3/4	3/4	1470
	3/4	1	1475
	3/4	1 1/4	1480
	1/2	3/4	1490
	1/2	1	1500
	5/8	1	1510
3/8	3/4	1 1/4	1520
	3/4	1 1/2	1525
	3/4	1	1530
1/2	3/4	1 1/4	1540
	3/4	1 1/2	1550

STYLE 2000



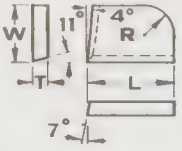
SUPPLIED WITHOUT CLEARANCE

DIMENSIONS				Blank Order No.
Thickness (T)	Width (W)	Length (L)	Radius (R)	
	1/8	5/8	1/16	2010
1/16	3/16	1/4	1/16	2020
	1/4	1/4	1/16	2025
	1/16	1/16	1/16	2026
	1/4	5/16	1/16	2030
	1/8	1/2	1/16	2035
	5/32	3/8	1/16	2036
	1/16	1/16	1/16	2040
	3/16	1/2	1/16	2050
	1/4	3/8	1/16	2060
3/32	1/4	1/2	1/16	2070
	5/16	5/16	1/4	2075
	5/16	3/8	1/4	2080
	3/8	3/8	1/4	2090
	3/8	1/2	1/4	2100
	7/16	1/2	1/4	2105
	1/8	7/16	3/16	2106
	3/16	3/4	3/16	2110
	1/4	1/2	3/16	2120
	1/4	3/8	3/16	2130
	1/4	3/4	3/16	2140
	5/16	7/16	1/4	2150
1/8	5/16	1/2	1/4	2160
	5/16	5/8	1/4	2170
	3/8	1/2	1/4	2180
	3/8	3/4	1/4	2190
	1/2	1/2	3/8	2200
	1/2	3/4	3/8	2210
	3/4	3/4	3/8	2215
	3/8	9/16	1/4	2220
5/32	3/8	3/4	1/4	2230
	7/16	3/8	1/4	2235
	3/8	3/8	3/8	2240

STYLE 3000 and STYLE 4000

RIGHT HAND BLANK LEFT HAND BLANK

With clearances on two sides



L1432 SCRAPER BLANKS

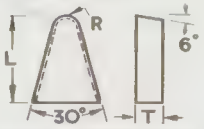
Blank Order No.	Dimensions		
	T	W	L
L51	2/64	1/32	1
L52	1/16	1/4	1
L53	3/32	1/4	1
L54	1/8	1/4	1 1/4

← To facilitate the grinding to size of two opposite tip surfaces when, for example, the tip extends entirely across the shank width, dimensions marked * are supplied 1/32" over size on WIDTH, dimensions marked † are supplied 1/32" over size on LENGTH, excluding tolerance.

STANDARD BLANKS

ROUND NOSE BLANKS — STYLE 7000

Tips with T = 1/16" and over supplied with clearance angles.



Blank Order No.	Dimensions		
	Thickness (T)	Length (L)	Nose Radius(R)
7045	3/32	7/16	1/16
7115	1/8	1/2	3/32
7245	3/32	5/8	1/8
7295	3/16	3/4	5/32
7355	1/4	3/4	5/32
7406	1/4	7/8	3/16
7445	5/16	7/8	3/16
7485	5/16	1 1/8	7/32

STANDARD TOLERANCES ON CARBOLOY BLANKS

Unground Carboloy Cemented Carbide blanks supplied with the following tolerances unless otherwise specified.

Blank Dimension	Tolerance
Up to 3/8"	+ .015" – .000"
Over 3/8" to 3/4"	+ .020" – .000"
Over 3/4" to 1 1/2"	+ .030" – .000"

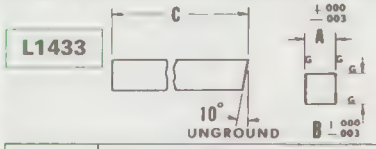
REAMER BLANKS — STYLE RT

Note: Style RRT Blanks are supplied without Radius R.

Blank Order No.	Dimensions			
	Thickness (T)	Width (W)	Length (L)	Radius (R)
RT- 1	3/32	1/16	1/2	1/4
RT- 2	3/64	3/32	1/2	1/4
RT- 3	3/64	3/32	11/16	1/4
RT- 4	1/16	1/8	11/16	1/4
RT- 5	5/64	1/8	7/8	1/4
RT- 6	3/32	1/16	1/4	1/16
RT- 7	1/16	1 13/64	3/4	3/16
RT- 8	1/16	17/64	3/4	3/8
RT- 9	1/16	5/16	1/2	3/8
RT-10	1/16	3/8	3/4	3/8
RT-11	3/64	3/32	1	1/4

SOLID SQUARE BORING TOOLS

L1433



Tool Order No.	Dimensions		
	A +.000 –.003	B .000 –.003	C
SQ310	3/16	3/16	1 1/4
SQ410	1/4	1/4	1 1/4
SQ512	5/16	5/16	1 1/2
SQ614	3/8	3/8	1 3/4

Ground on 4 sides.

SOLID ROUND STOCK

ORDER No. RR ! No. of 1/64" in size
Lengths from 2 1/2" to 12"
Sizes 1/16" to 1/2"

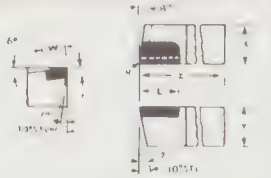
DIMENSIONS INCHES

CARBOLOY BRAZED SINGLE POINT TOOLS

STRAIGHT TURNING TOOLS — 90

STYLE A

A low cost, general purpose tool for turning, facing and boring.

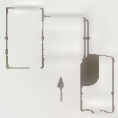


DIMENSIONS INCHES

Tool Number		Tool Dimensions				Tip Number	
RH	LH	X	Y	Z	R	RH	LH
AR4	AL4	1/4	1/4	1 1/2	1/64	1025	1025
AR5	AL5	5/16	5/16	2 1/2	1/16	1080	1080
AR6	AL6	3/8	3/8	3 1/2	1/64	2070	2070
AR8	AL8	1/2	1/2	4	1/32	P-3170	P-4170
AR10	AL10	5/8	5/8	5	1/32	P-3230	P-4230
AR12	AL12	3/4	3/4	5 1/2	1/32	P-3290	P-4290
AR1216	AL1216	3/4	1	6	1/32	P-3380	P-4380
AR16	AL16	1	1	7	1/32	P-3390	P-4390
AR1620	AL1620	1	1 1/4	8	1/32	P-3460	P-4460
AR20	AL20	1 1/4	1 1/4	8	1/32	P-3460	P-4460
AR24	AL24	1 1/2	1 1/2	10	1/32	P-3465	P-4465

TYPICAL APPLICATIONS

Contour Turning

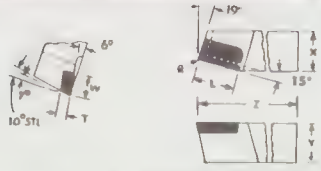


Chamfering

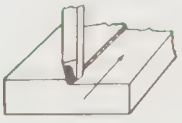
LEAD ANGLE TOOLS — 15 LEAD ANGLE

STYLE B

Style BR and BL tools are designed particularly for rough turning, boring and facing.



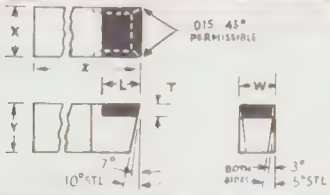
Tool Number		Tool Dimensions				Tip No.	
RH	LH	X	Y	Z	R	RH	LH
BR6	BL6	3/8	3/8	3 1/2	1/64	2070	2070
BR8	BL8	1/2	1/2	4	1/32	P-3170	P-4170
BR10	BL10	5/8	5/8	5	1/32	P-3230	P-4230
BR12	BL12	3/4	3/4	5 1/2	1/32	P-3290	P-4290
BR1216	BL1216	3/4	1	6	1/32	P-3380	P-4380
BR16	BL16	1	1	7	1/32	P-3390	P-4390
BR1620	BL1620	1	1 1/4	8	1/32	P-3460	P-4460
BR20	BL20	1 1/4	1 1/2	8	1/32	P-3460	P-4460
BR24	BL24	1 1/2	1 1/2	10	1/32	P-3465	P-4465



Note: A knee tool similar to the above can be supplied to order with 10° S.C.E.A. 18° E.C.E.A. for use with knee tool holders in British type Turret Lathes.

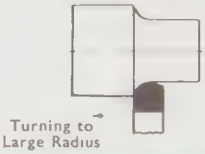
SQUARE NOSE TOOL

STYLE C



Tool No.	Tool Dimensions			Tip No.
	X	Y	Z	
C4	1/4	1/4	3	1025
C5	5/16	5/16	3	1075
C6	3/8	3/8	3 1/2	1080
C8	1/2	1/2	4	P-1180
C10	5/8	5/8	5	P-1235
C12	3/4	3/4	5 1/2	P-1330
C1216	3/4	1	6	P-1380
C16	1	1	7	P-1390
C1620	1	1 1/4	8	P-1390
C20	1 1/4	1 1/4	8	P-1465

Grooving and Vee-Grooving

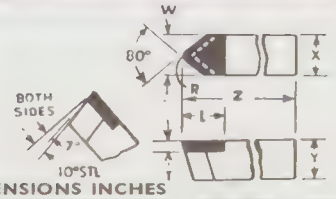


Turning to Large Radius

POINTED NOSE TOOL — 80 INCLUDED ANGLE

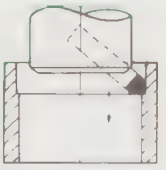
STYLE D

Style "D" is designed primarily as a boring tool for turret lathes, vertical turret lathes, boring mills.



DIMENSIONS INCHES

Tool No.	Tool Dimensions			Tip No.
	X	Y	Z	
D4	1/4	1/4	1 1/2	5030
D5	5/16	5/16	2 1/2	5080
D6	3/8	3/8	3 1/2	5100
D8	1/2	1/2	4	5200
D10	5/8	5/8	5	5240
D12	3/4	3/4	5 1/2	5340
D1216	3/4	1	6	5340
D16	1	1	7	5410
D1620	1	1 1/4	8	5410



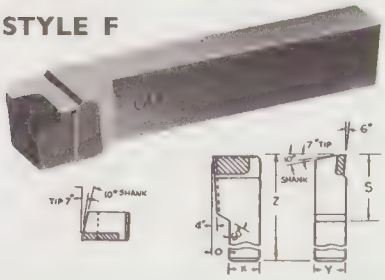
Boring on Vertical Turret Lathe

Undercutting

OFFSET FACING TOOLS

DIMENSIONS INCHES

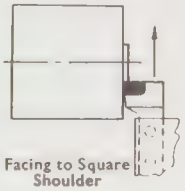
STYLE F



For plunge facing from the square turrett of a turret lathe; or for turning and boring from overhead on a vertical turret lathe or boring mill.

Tool No.		Tool Dimensions					Tip No.	
RH	LH	X	Y	Z	O	S	RH	LH
FR6	FL6	3/8	3/8	3	3/16	1	2070	2070
FR8	FL8	1/2	1/2	4	1/4	1 1/8	P-4170	P-3170
FR10	FL10	5/8	5/8	5	3/8	1 1/4	P-4230	P-3230
FR12	FL12	3/4	3/4	5 1/2	1/2	1 3/8	P-4290	P-3290
FR1216	FL1216	3/4	1	6	1/2	1 3/8	P-4380	P-3380
FR16	FL16	1	1	7	1/2	1 3/8	P-4390	P-3390
FR1620	FL1620	1	1 1/4	8	1/2	1 3/8	P-4460	P-3460
FR20	FL20	1 1/4	1 1/4	8	3/4	2	P-4460	P-3460

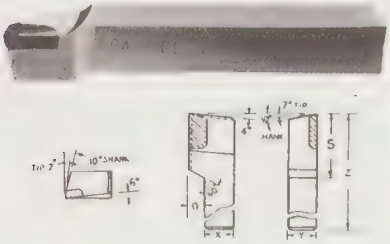
TYPICAL APPLICATIONS



Facing to Square Shoulder

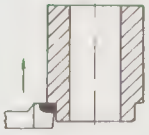
OFFSET TURNING TOOLS

STYLE G

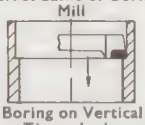


Style "G" offset tools are used primarily on heavy roughing cuts

Tool No.		Tool Dimensions					Tip No.	
RH	LH	X	Y	Z	O	S	RH	LH
GR6	GL6	3/8	3/8	3	3/16	1	2070	2070
GR8	GL8	1/2	1/2	4	1/4	1 1/8	P-3170	P-4170
GR10	GL10	5/8	5/8	5	3/8	1 1/4	P-3230	P-4230
GR12	GL12	3/4	3/4	5 1/2	1/2	1 3/8	P-3290	P-4290
GR1216	GL1216	3/4	1	6	1/2	1 3/8	P-3380	P-4380
GR16	GL16	1	1	7	1/2	1 3/8	P-3390	P-4390
GR1620	GL1620	1	1 1/4	8	1/2	1 3/8	P-3460	P-4460
GR20	GL20	1 1/4	1 1/4	8	3/4	2	P-3460	P-4460
GR24	GL24	1 1/2	1 1/2	10	3/4	2	P-3465	P-4465



Turning on Vertical Turret Lathe or Boring Mill



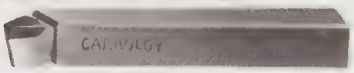
Boring on Vertical Turret Lathe

ROUND NOSE STRAIGHT AND CRANKED

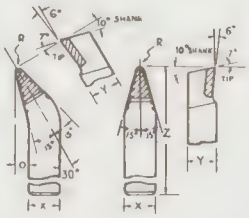
STYLE H

ROUND NOSE STRAIGHT

ROUND NOSE CRANKED



A general purpose tool for jobbing work. In the larger sizes it is for use in planers and shapers.

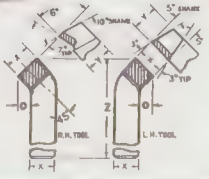


Tool No.			Tool Dimensions					Tip No.
RH	Central	LH	X	Y	Z	O	R	
HR6	HC6	HL6	3/8	3/8	3 1/2	3/16	1/16	7045
HR8	HC8	HL8	1/2	1/2	4	1/4	3/32	7115
HR10	HC10	HL10	5/8	5/8	5	3/16	1/8	7245
HR12	HC12	HL12	3/4	3/4	5 1/2	3/8	3/32	7295
HR1216	HC1216	HL1216	3/4	1	6	3/8	3/32	7355
HR16	HC16	HL16	1	1	7	1/2	3/32	7406
HR1620	HC1620	HL1620	1	1 1/4	8	1/2	1/16	7445
HR20	HC20	HL20	1 1/4	1 1/4	8	5/8	3/32	7485

CRANKED TURNING AND FACING TOOL, SQUARE NOSE — 45°

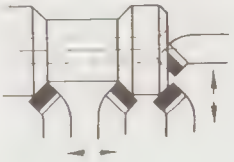
STYLE J

For multi-purpose high-production machining. Suitable for quite heavy cuts in turning, facing, chamfering.



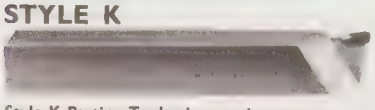
Tool No.		Tool Dimensions				Tip No.
RH	LH	X	Y	Z	O	
JR6	JL6	3/8	3/8	3 1/2	1/4	1080
JR8	JL8	1/2	1/2	4	5/16	P-1180
JR10	JL10	5/8	5/8	5	7/16	P-1235
JR12	JL12	3/4	3/4	5 1/2	1/2	P-1330
JR1216	JL1216	3/4	1	6	1/2	P-1380
JR16	JL16	1	1	7	11/16	P-1390
JR1620	JL1620	1	1 1/4	8	11/16	P-1390
JR20	JL20	1 1/4	1 1/4	8	3/4	P-1465

TYPICAL APPLICATIONS

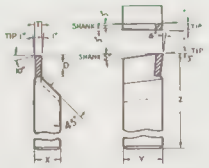


OFFSET PARTING TOOL

STYLE K



Style K Parting Tools give maximum support to the Carboloy tip.

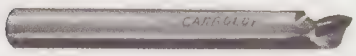


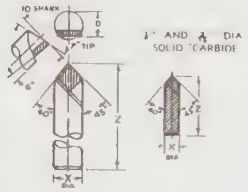
Tool No.	Tool Dimensions					Max. Diam. to Cut	Tip No.
	X	Y	Z	D	'T'		
K610	3/8	5/8	5 1/2	7/16	3/32	7/8	P-1
K812	1/2	3/4	5 1/2	1/2	1/8	1	1106
K1016	5/8	1	6 1/2	5/8	7/16	1 1/2	P-3
K1220	3/4	1 1/4	7 1/2	1	7/16	2	P-4

ROUND SHANK BORING TOOLS

DIMENSIONS INCHES

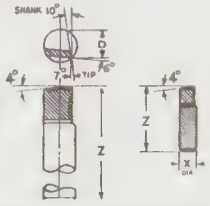
HELD AT 45°
STYLE P





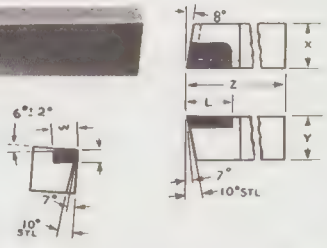
STYLE P		STYLE N		Tool Dimensions		
Tool No.	Tip No.	Tip No.	Tool No.	X Diam.	Z	D
P3	Solid Carbide	—	N3	3/16 —.0005 —.0015	1/4	5/32
P4	Solid Carbide	—	N4	1/4 —.0005 —.0015	1	7/32
P5	1025	1025	N5	5/16 —.0005 —.0015	1 1/2	1 7/64
P6	1060	1060	N6	3/8 —.0005 —.0015	2 1/2	3/16
P7	1080	1060	N7	7/16 —.0005 —.0015	3	1 1/32
P8	1080	1080	N8	1/2 —.0005 —.0015	3	7/16

ROUND SHANK BORING TOOLS
HELD AT 90°
STYLE N



CARBOLOY STANDARD PULLEY GROOVING TOOLS

STYLE R



Tool No.	Tool Dimensions			Tip No.
	X	Y	Z	
R57	5/16	7/16	3	2050
R68	3/8	1/2	3	P-3120
R610	3/8	3/8	3	P-3120
R812	1/2	3/4	4 1/2	P-3260
R1014	5/8	7/8	4 1/4	P-3290

STYLE V

Tool No.	Section Groove	Shank Dimensions			
		X	Y	Z	Blank No.
VA-34 VA-38	A	5/8	1	7	PGA-34 PGA-38
VB-34 VB-38	B	3/4	1	7	PGB-34 PGB-38
VC-34 VC-38	C	1	1 1/4	8	PGC-34 PGC-38

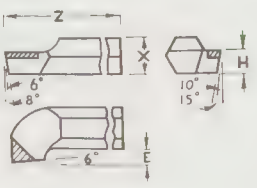
THREADING TOOL — 60° - 55° INCLUDED ANGLE

STYLE E

Min. Pitch T.P.I.	Tool Order No.		Shank Dimensions		
	60°	55°	X	Y	Z
48	EN-6	EW-6	3/8	3/8	3
28	EN-8	EW-8	1/2	1/2	4 1/2
14	EN-12	EW-12	3/4	3/4	5 1/2
14	EN-1216	EW-1216	3/4	1	7

BORING BAR — HEXAGON SHANK

STYLE BB



Tool No.	Hex. A/F X	Length Z	Offset E	H	Blank Number
T 6	3/8	8	3/16	5/16	9570
T 8	1/2	10	1/4	3/8	9571
T10	5/8	10	5/16	1/2	9572
T12	3/4	10	5/16	5/8	9572
T16	1	12	5/16	3/4	9572

CARB-O-LOCK GRADE SELECTION RECOMMENDATIONS

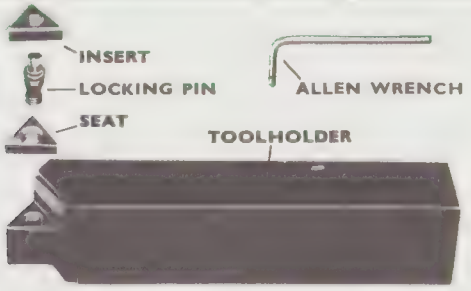
FOR MACHINING CAST IRON, NON-FERROUS METALS AND NON-METALLICS:

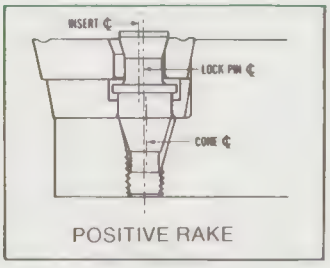
GRADE 883 General Machining
- Medium Shock Resistance
- Medium Wear Resistance

FOR MACHINING STEEL:

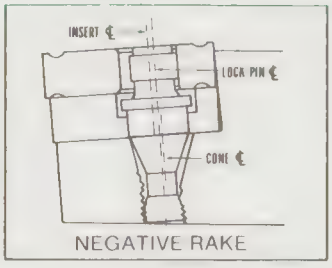
GRADE 350
Semi-Roughing and Finishing
- High Cutting Temperature Resistance
- Good Wear Resistance

GRADE 370
Heavy Duty Roughing
- Excellent Resistance to Cutting Temperature, Shock and Cutting Load.





POSITIVE RAKE

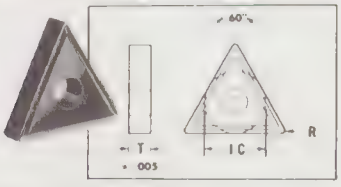


NEGATIVE RAKE

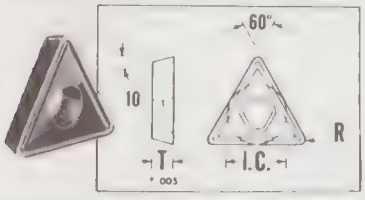
CARB-O-LOCK Triangular Inserts With Chip Control

PRE-HONED

DIMENSIONS INCHES



NEGATIVE RAKE

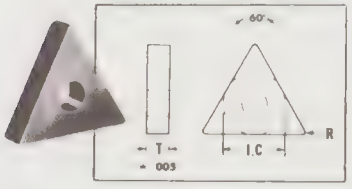


POSITIVE RAKE

Specifications				Negative Rake Insert Order Number	Positive Rake Insert Order Number	Standard Grades			Standard Pkg. Qty.
I.C.		T	R						
Dim.	Tol.					883	350	370	
1/4	±.002	1/8	1/64	TNMG-221	—	S	S	S	10
			1/32	TNMG-222	—	S	S	S	10
5/16	±.002	1/8	1/32	—	TPMG-2.522	S	S	S	10
			1/64	TNMG-321	TPMG-321	S	S	S	10
3/8	±.002	1/8	1/32	TNMG-322	TPMG-322	S	S	S	10
			3/64	TNMG-323	TPMG-323	S	S	S	10
			1/16	TNMG-324	TPMG-324	S	S	S	10
			1/64	TNMG-431	TPMG-431	S	S	S	5
1/2	±.003	3/16	1/32	TNMG-432	TPMG-432	S	S	S	5
			3/64	TNMG-433	TPMG-433	S	S	S	5
			1/16	TNMG-434	TPMG-434	S	S	S	5
			1/32	TNMG-542	—	S	S	S	5
5/8	±.003	1/4	3/64	TNMG-543	TPMG-543	S	S	S	5
			1/16	TNMG-544	—	S	S	S	5
			1/8	TNMG-548	—	S	S	S	5

NEGATIVE RAKE CARB-O-LOCK Triangular Inserts Without Chip Control

GRADE 883 NOT PRE-HONED—GRADES 350 AND 370 PRE-HONED



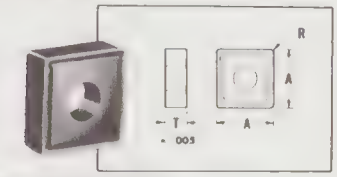
Specifications				Insert Order Number	Standard Grades			Standard Pkg. Qty.
I.C.		T	R					
Dim.	Tol.				883	350	370	
1/4	.002	1/8	1/32	TNMA-222	S	—	—	10
			1/64	TNMA-321	S	S	S	10
3/8	±.002	1/8	1/32	TNMA-322	S	S	S	10
			3/64	TNMA-323	S	—	—	10
			1/16	TNMA-324	S	S	S	10
			1/64	TNMA-431	S	S	S	5
			1/32	TNMA-432	S	S	S	5
1/2	±.003	3/16	3/64	TNMA-433	S	—	—	5
			1/16	TNMA-434	S	S	S	5
			1/32	TNMA-542	S	S	S	5
5/8	.003	1/4	1/16	TNMA-544	S	S	S	5

DIMENSIONS INCHES S—Stock

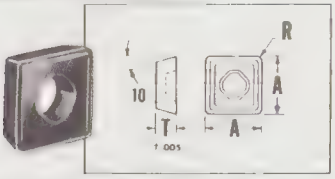
CARB-O-LOCK SQUARE INSERTS With Chip Control

PRE-HONED

DIMENSIONS INCHES



NEGATIVE RAKE

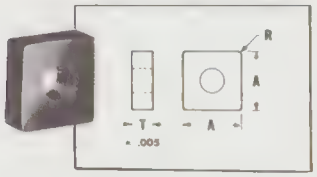


POSITIVE RAKE

Specifications I.C. Dim.	Specifications I.C. Tol.	Specifications T	Specifications R	Negative Rake Insert Order Number	Positive Rake Insert Order Number	Standard Grades 883	Standard Grades 350	Standard Grades 370	Standard Pkg. Qty.
3/8	±.002	1/8	1/64	SNMG-321	—	S	S	S	10
3/8		1/8	1/32	SNMG-322	SPMG-322	S	S	S	10
3/8		1/8	3/64	—	SPMG-323	S	S	S	10
1/2		3/16	1/32	SNMG-432	SPMG-432	S	S	S	10
1/2	±.003	3/16	3/64	SNMG-433	SPMG-433	S	S	S	10
1/2		3/16	1/16	SNMG-434	SPMG-434	S	S	S	10
5/8	±.003	1/4	3/64	—	SPMG-543	S	S	S	5
3/4		1/4	1/32	SNMG-642	SPMG-642	S	S	S	5
3/4	±.003	1/4	3/64	SNMG-643	SPMG-643	S	S	S	5
3/4		1/4	1/16	SNMG-644	SPMG-644	S	S	S	5

NEGATIVE RAKE CARB-O-LOCK Square Inserts Without Chip Control

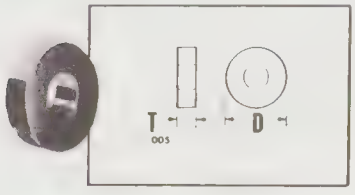
GRADE 883 NOT PRE-HONED—GRADES 350 AND 370 PRE-HONED



Specifications I.C. Dim.	Specifications I.C. Tol.	Specifications T	Specifications R	Insert Order Number	Standard Grades 883	Standard Grades 350	Standard Grades 370	Standard Pkg. Qty.
3/8	±.002	1/8	1/32	SNMA-322	S	S	S	10
1/2	±.003	3/16	1/32	SNMA-432	S	S	S	10
			3/64	SNMA-433	S	—	—	10
3/4	±.003	1/4	1/16	SNMA-644	S	S	S	5

NEGATIVE RAKE CARB-O-LOCK Round Inserts Without Chip Control

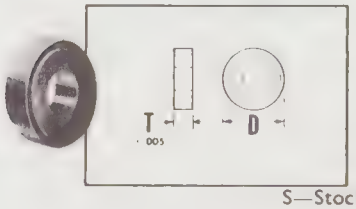
GRADE 883 NOT PRE-HONED—GRADES 350 AND 370 PRE-HONED



Specifications D Dim.	Specifications D Tol.	Specifications T	Insert Order Number	Standard Grades 883	Standard Grades 350	Standard Grades 370	Standard Pkg. Qty.
1/2	.003	3/16	RNMA-43	S	S	S	10
3/4	.003	1/4	RNMA-64	S	—	S	5
1	.004	3/8	RNMA-86	S	—	S	3

NEGATIVE RAKE CARB-O-LOCK Round Inserts With Chip Control

PRE-HONED



S—Stock

Specifications D Dim.	Specifications D Tol.	Specifications T	Insert Order Number	Standard Grades 883	Standard Grades 350	Standard Grades 370	Standard Pkg. Qty.
1/2	.003	3/16	RNMG-43	S	S	S	10
3/4	.003	1/4	RNMG-64	S	S	S	5
1	.004	3/8	RNMG-86	S	—	S	5

PARTS FOR CARB-O-LOCK

DIMENSIONS INCHES

POSITIVE RAKE AND NEGATIVE RAKE TOOLHOLDERS

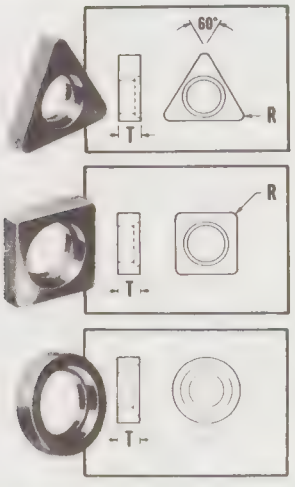
POSITIVE RAKE LOCK PINS

Insert Size Dimension		Lock Pin Order Number	Nominal Cam Length
I.C. or Sq.	Thick		
5/16	1/8	PL-2.53	3/8
3/8	1/8	PL-34	1/2
1/2	3/16	PL-46	3/4
5/8	1/4	PL-58	1
3/4	1/4	PL-68	1

NEGATIVE RAKE LOCK PINS

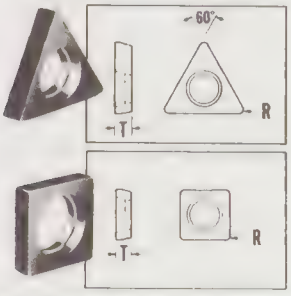
Insert Size		Lock Pin Order Number
I.C., Sq. or Rd.	Thick	
1/4	1/8	NL-23
3/8	1/8	NL-34
1/2	3/16	NL-46
5/8	1/4	NL-58
3/4	1/4	NL-68
1	3/8	NL-810

NEGATIVE RAKE SEATS



Seat Order Number	Use with Insert Sizes					Seat Specifications	
	I.C.	Rad.	Sq.	Rad.	Rd.	T	R
ITSN-322	3/8	1/64, 1/32	—	—	—	1/8	1/32
ITSN-323	3/8	3/64	—	—	—	1/8	3/64
ITSN-324	3/8	1/16	—	—	—	1/8	1/16
ITSN-432	1/2	1/64, 1/32	—	—	—	3/16	1/32
ITSN-433	1/2	3/64	—	—	—	3/16	3/64
ITSN-434	1/2	1/16	—	—	—	3/16	1/16
ITSN-532	5/8	1/32	—	—	—	3/16	1/32
ITSN-533	5/8	3/64	—	—	—	3/16	3/64
ITSN-534	5/8	1/16	—	—	—	3/16	1/16
ITSN-539	5/8	1/8	—	—	—	3/16	9/64
ISSN-322	—	—	3/8	1/64, 1/32	—	1/8	1/32
ISSN-432	—	—	1/2	1/32, 3/64	—	3/16	1/32
ISSN-433	—	—	1/2	3/64, 1/16	—	3/16	3/64
ISSN-632	—	—	3/4	1/32, 3/64	—	3/16	1/32
ISSN-633	—	—	3/4	3/64, 1/16	—	3/16	3/64
IRSN-43	—	—	—	—	1/2	3/16	—
IRSN-63	—	—	—	—	3/4	3/16	—
IRSN-84	—	—	—	—	1	1/4	—

POSITIVE RAKE SEATS



Seat Order Number	Use With Insert Size		Seat Specifications	
	I.C.	Sq.	T	R
TS-321-P	3/8	—	1/8	1/64
TS-431-P	1/2	—	3/16	1/64
TS-531-P	5/8	—	3/16	1/64
SS-321-P	—	3/8	1/8	1/64
SS-431-P	—	1/2	3/16	1/64
SS-531-P	—	5/8	3/16	1/64
SS-631-P	—	3/4	3/16	1/64

CARB-O-LOCK TOOLHOLDERS

STYLE A. Triangular Insert, Straight Turning Tool.
Right hand or Left hand.
Negative Rake, 1/4", 3/8", 1/2", 5/8" inserts.
Positive Rake, 5/16", 3/8", 1/2" inserts.

STYLE A. Round Insert, Straight Turning Tool.
Right hand or Left hand.
Negative Rake only, 1/2", 3/4", 1" inserts.

CARB-O-LOCK TOOLHOLDERS

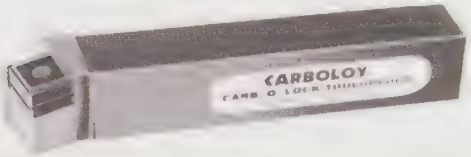
STYLE B. Triangular Insert, 15° Side Cutting Edge Angle Tool.
Right hand or Left hand.
Negative Rake, $\frac{1}{4}$", $\frac{3}{8}$", $\frac{1}{2}$" inserts.
Positive Rake, $\frac{5}{16}$", $\frac{3}{8}$", $\frac{1}{2}$" inserts.

STYLE B. Square Insert, 15° Side Cutting Edge Angle Tool.
Right hand or Left hand.
Positive Rake only, $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$" inserts.

STYLE B. Square Insert, 20° Side Cutting Edge Angle Tool.
Right hand or Left hand.
Negative Rake only, $\frac{3}{8}$", $\frac{1}{2}$", $\frac{3}{4}$" inserts.

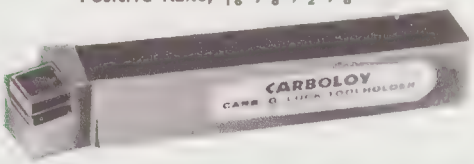
STYLE C. Triangular Insert, End Cutting Tool.
Neutral. Positive Rake only, $\frac{5}{16}$", $\frac{3}{8}$", $\frac{1}{2}$" inserts.

STYLE D. Square Insert, 45° Side Cutting Edge Angle Tool.
Neutral. Negative Rake, $\frac{3}{8}$", $\frac{1}{2}$", $\frac{3}{4}$" inserts.
Positive Rake, $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$" inserts.



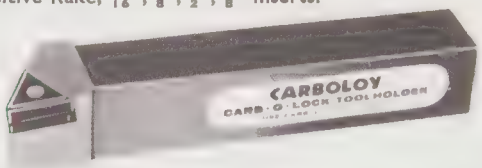
STYLE D. Square Insert. Offset 45° Side Cutting Edge Angle Tool.
Right hand, Left hand.
Negative Rake, $\frac{3}{8}$", $\frac{1}{2}$", $\frac{3}{4}$" inserts.
Positive Rake, $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$" inserts.

STYLE E. Triangular insert. 30° Side Cutting Edge Angle Tool.
Neutral. Negative Rake, $\frac{1}{4}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$" inserts.
Positive Rake, $\frac{5}{16}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$" inserts.



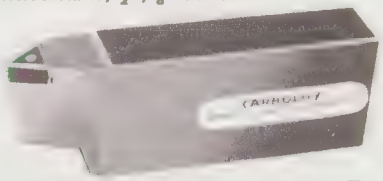
STYLE F. Square Insert. 15° Offset End Cutting Tool.
Right hand, Left hand.
Negative Rake, $\frac{3}{8}$", $\frac{1}{2}$", $\frac{3}{4}$" inserts.
Positive Rake, $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$" inserts.

STYLE F. Triangular Insert, Offset End Cutting Tool.
Right hand, Left hand.
Negative Rake, $\frac{1}{4}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$" inserts.
Positive Rake, $\frac{5}{16}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$" inserts.



STYLE G. Triangular Insert, Offset Side Cutting Tool.
Right hand, Left hand.
Negative Rake, $\frac{1}{4}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$" inserts.
Positive Rake, $\frac{5}{16}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$" inserts.

STYLE J. Triangular Insert Tracer Tool.
Right hand, Left hand.
Negative Rake, $\frac{1}{2}$", $\frac{5}{8}$" inserts.
Positive Rake, $\frac{1}{2}$", $\frac{5}{8}$" inserts.



STYLE Q. Triangular Insert, Tracer Tool "Fischer"
Right hand, Left hand.
Negative Rake, $\frac{1}{2}$", $\frac{5}{8}$" inserts.
Positive Rake, $\frac{1}{2}$", $\frac{5}{8}$" inserts.

MERCER DIAL GAUGES

MODEL "ALPHA" 0.001″ and 0.0005″

No.	Diam.	Reading	Graduation	Travel
10	2¼″	.001″	0-50-0	0.5″
11	2¼″	.001″	0-100	0.5″
12	2¼″	.0005″	0-25-0	0.5″
13	2¼″	.0005″	0-50	0.5″
14	2¼″	.0005″	0-20-0	0.5″
15	2¼″	.0005″	0-40	0.5″
16	2¼″	.001″	0-100	1.0″
17	2¼″	.0005″	0-50	1.0″
18	3″	.001″	0-50-0	0.5″
19	3″	.001″	0-100	0.5″
20	3″	.0005″	0-25-0	0.5″
21	3″	.0005″	0-50	0.5″
21a	3″	.0005″	0-20-0	0.5″
21b	3″	.0005″	0-40	0.5″
22	3″	.001″	0-100	1.0″
22a	3″	.001″	0-100	2.0″
23	3″	.0005″	0-50	1.0″
24	4″	.001″	0-50-0	0.5″
25	4″	.001″	0-100	0.5″
26	4″	.0005″	0-25-0	0.5″
27	4″	.0005″	0-50	0.5″
27a	4″	.0005″	0-20-0	0.5″
27b	4″	.0005″	0-40	0.5″
28	4″	.001″	0-100	1.0″
29	4″	.0005″	0-50	1.0″

MODEL "BETA" 0.0001″

No.	Diam.	Reading	Graduation	Travel
40	2¼″	.0001″	0-50-0	0.2″
40/a	2¼″	.0001″	0-50-0	0.05″
41	2¼″	.0001″	0-100	0.2″
41/a	2¼″	.0001″	0-100	0.05″
42	2¼″	.0001″	0-50-0	0.5″
43	2¼″	.0001″	0-100	0.5″
44	3″	.0001″	0-50-0	0.2″
45	3″	.0001″	0-100	0.2″
46	4″	.0001″	0-50-0	0.2″
47	4″	.0001″	0-100	0.2″
48	3″	.0001″	0-100	1″

MODEL "GAMMA"
0.01 mm. and 0.002 mm.
1″ and 2″ travel gauges available

No.	Diam.	Reading	Graduation	Travel
	m.m.	mm.		mm.
50	58	0.01	0-50-0	12
51	58	0.01	0-100	12
52	58	0.01	0-100	25
53	58	0.002	0-10-0	5
53a	58	0.002	0-10-0	1
54	58	0.002	0-20	5

SERIES 180 DIAL GAUGES

Diameter 1 1/16″ (42 mm.)			
No.	Reading	Graduation	Travel
181	.001″	0-50-0	.250″
182	.001″	0-100	.250″
183	.0005″	0-25-0	.250″
184	.0005″	0-50	.250″
185	.01 mm.	0-50-0	6 mm.
186	.01 mm.	0-100	6 mm.
191	.0005″	0-10-0	.100″
192	.0005″	0-20	.100″
193	.0001″	0-5-0	.050″
194	.0001″	0-10	.050″

BACK PLUNGER DIAL GAUGES

for applications where the dial must be at right angles to the gauging plunger.

Lifting levers not available for these models.

SERIES 90 — 1½″ diameter
¼″ diameter Holding Rod

No.	Reading	Graduation	Travel
91	.001″	0-25-0	.15″
92	.001″	0-50	.15″
93	.01 mm.	0-50-0	4 mm.
94	.01 mm.	0-100	4 mm.

SERIES 350 — 2¼″ diameter
5/16″ diameter Holding Rod

No.	Reading	Graduation	Travel
350	.001″	0-50-0	.125″
351	.0005″	0-25-0	.125″
352	.0001″	0-50-0	.030″
353	.002 mm.	0-10-0	.75 mm.

SERIES 300 Lever type with geared mechanism

No reversing lever.
Readings in a clockwise direction whichever way stylus is moved.
All geared mechanism.
Measuring pressure under 1 oz.

G.301 0.0005″ 0-20-0	**G.302** 0.01 mm. 0-50-0
G.303 0.0001″ 0-4-0	**G.304** 0.002 mm. 0-10-0

DIAL GAUGE ACCESSORIES

TOLERANCE POINTERS

No. 16187 (2¼″ gauge)
No. 16467 (3″ gauge)

RIGHT ANGLE BRACKET

No. 15263 (2¼″ gauges)
No. 15031 Series 180 gauges

BOTTOM DUST COVER

Part No. 16421
This can be fitted to all dial gauges having 5/16″ diameter stem.

LIFTING LEVER

No. 11654

RACK EXTENSIONS

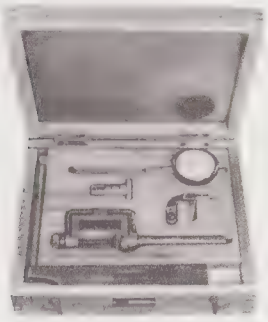
Lengths	½″	¾″	1″	1¼″	1½″	1¾″	2″	2¼″	2½″	2¾″

CONTACT POINTS Standard Anvil, Steel Ball, Sapphire or Tungsten End. Spherical, Pointed, Chisel, Flat, Roller, Stylus or Needle Point Anvils.

GAUGE BACKS

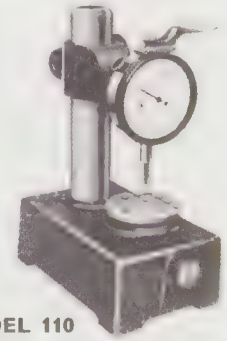
- **A** Offset lug back.
- **B** Centre lug back.
- **C** Flat back.
- **D** 5/16 B.S.F. x ⅜″ deep.
- **E** 5/16 B.S.F. x 1″ length.
- **F** 5/16″ dia. x 1″ length.
- **G** a ½″, b ⅞″, c ¼″ B.S.F., B.S.W. and American Thread. d 1¼″, e ¼″, f ⅛″.
- **H** To allow 12 positions to be achieved. Types G & H backs available with 2¼″ dial gauges only.
- **G** Also available for series 180.

UNIVERSAL TEST INDICATOR SETS



MODEL 107

Comprises series 180 Dial Gauge, Arm and Universal Clamp for fitting to Surface Gauge, "G" clamp, Toolpost holder and Right Angle Attachment. Weight 3 lbs. Complete in polished wooden case, with gauge readings .0005" or .01 mm.



MODEL 110

Small bench gauge with heavy base and rigid 1¼" diameter column for measuring components up to 1½" in height and diameter. The 2" hardened and lapped platen in the base is provided with means for fine adjustment and positive clamping. 2½" dial gauges fitted as standard. Vertical capacity 1½". Distance of gauge spindle to column 1⅛". Weight 4.3 lbs.

MODEL 112

A rigid general purpose Bench Gauge and Comparator, 6½" square ground table, with 1⅛" diameter column. 2½" diameter. Dial Gauge with lifting lever, fitted as standard. Vertical capacity 7". Distance from gauge spindle to column 3½". Weight 22 lbs.

DIAL MICROMETERS — DIRECT READING

or quick and accurate measurement of a wide range of both hard and soft materials.

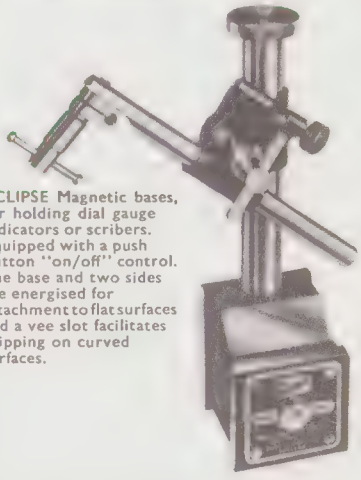
MODEL 142

Model 142 4" throat. ⅜" diameter anvils. ½" capacity between anvils. Available with readings .001", .0005" and .01 mm. 2½" diameter dials as standard. This model has a downward pressure on the measuring anvils. The spindle is raised by means of the lifting lever. Weight 2 lb. Supplied in case as standard.

MODEL 130

Model 130 has a downward pressure on the ⅜" diameter measuring anvils. The black bezel is rotable for zero setting and is provided with a clamp to lock it when set. Capacity between anvils ½", available with readings .001", .0005", .0001" or .01 mm. Weight 1 lb. Supplied in wooden case.

MAGNETIC BASES



ECLIPSE Magnetic bases, for holding dial gauge indicators or scribers. Equipped with a push button "on/off" control. The base and two sides are energised for attachment to flat surfaces and a vee slot facilitates gripping on curved surfaces.

Catalogue No.	Base Unit in inches	Overall height in ins.
903	1⅝ x 1⅞ x 1 13/16	9 3/16
902	1⅜ x 1⅞ x 1 13/16	8
901	2½ x 2½ x 3	9 3/16

MITUTOYO PRECISION HEIGHT MASTER 515-102

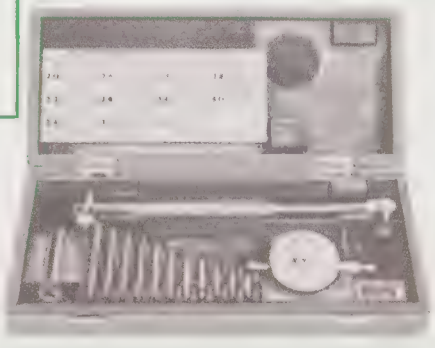
SPECIFICATIONS:

1. Basic unit number	515-102
Measuring range:	0-12".
Graduation: of micrometer head	.0001"
of vernier scale	.00001".
Carrier movement by micrometer head:	1.05" plus
Carrier movement by a turn of micrometer head:	.025".
Distance from the one block to the next:	1".
Movement of zero setting ring:	360°
Minimum reading of housing scale	.025"
Accuracy:—Overall accuracy of instrument over 12" range:	± .00005".
Parallelism: over entire land; less than	.00005".
Accuracy of Lead Screw: over a full inch:	± .00005".

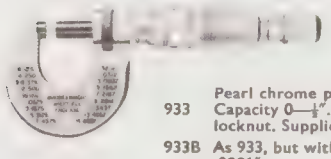
BORE GAUGES series 511 (.7" to 6.2")

Repeatability to .0001"; uses any A.G.D. Dial Indicator

Range	Actual Capacity	Number of Anvils	Number of Spacers	Bore Depth
.7-1.4"	.70-1.50"	8	3	4"
1.4-2.4"	1.40-2.60"	6	4	6"
2.4-4"	2.00-6.20"	11	4	6"



MICROMETERS



933

MICROMETER
with cut-away frames
½″ Capacity

Pearl chrome plated

933 Capacity 0—½″. Graduations .001″, with ratchet and locknut. Supplied in spring hinged pocket case.

933B As 933, but with vernier sleeve graduated to read in .0001″.

961 Capacity 0—1″. Graduations .001″, with ratchet and locknut. Supplied in spring hinged pocket case.

961A As 961 but graduated to read in half-thousandths.

961B As 961, but graduated to read in .0001″ by means of a vernier on the sleeve.

*

961F

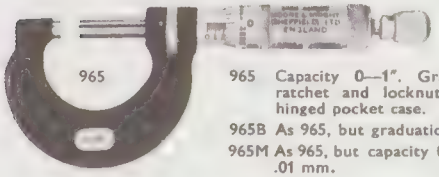
961/2″ Capacity 1″—2″. Graduations .001″, with ratchet and locknut. Supplied in spring hinged pocket case.

961B/2″ As 961/2″, but graduated to read in .0001″ by means of a vernier on the sleeve.

964

MICROMETER
with black crackle enamelled frame

964 Capacity 0—1″, Graduation .001″, with ratchet and locknut. Supplied in spring hinged pocket case.



965

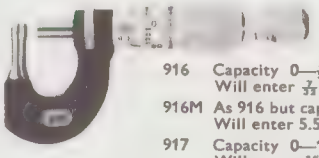
965 Capacity 0—1″. Graduation .001″, with ratchet and locknut. Supplied in spring hinged pocket case.

965B As 965, but graduations .0001″.

965M As 965, but capacity 0—25 mm. Graduation .01 mm.

TUBE MICROMETER
with ball anvil

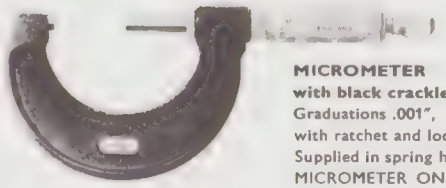
925 Capacity 0—½″. Graduations .001″, with ratchet and locknut. Will enter $\frac{1}{16}$″ diameter hole. No. 946 0—1″ "Graduations .001″.



916 Capacity 0—½″. Graduations .001″, with ratchet. Will enter $\frac{7}{32}$″ diameter hole.

916M As 916 but capacity 0—13 mm. Graduations .01 mm. Will enter 5.5 mm diameter hole.

917 Capacity 0—1″. Graduations .001″, with ratchet. Will enter ⅜″ diameter hole.



MICROMETER
with black crackle enamelled frame
Graduations .001″,
with ratchet and locknut.
Supplied in spring hinged case.
MICROMETER ONLY

No.	Capacity
966/2″	1—2″
966/3″	2—3″
966/4″	3—4″
966/5″	4—5″
966/6″	5—6″

Available in Boxed Sets
0—1, 1—2, 1—3 up to 12 in Set.

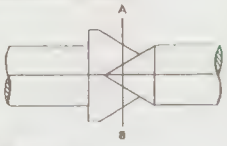
Graduations .0001″.
966B 1—2″
966XB 1—2″

Graduations .01 mm.
Complete with Radial End Setting Rod Gauges
966 MX/50 25— 50 mm.
966 MX/100 75—100 mm.
966 MX/150 125—150 mm.

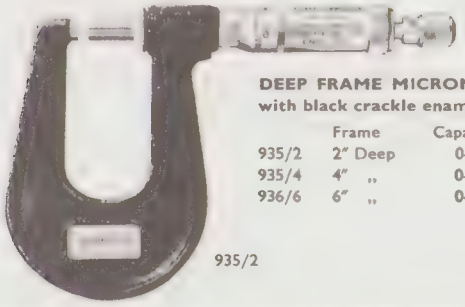
MICROMETER
with Radial End Setting Rod Gauges

No.	Capacity
966X/2″	1—2″
966X/3″	2—3″
966X/4″	3—4″
966X/5″	4— 5″
966X/6″	5—6″

SCREW THREAD MICROMETERS



Also available for — WHITWORTH, UNIFIED, METRIC, B.A. Threads.



935/2

DEEP FRAME MICROMETER
with black crackle enamelled frame.

	Frame	Capacity	Graduations
935/2	2″ Deep	0—½″	.001″
935/4	4″ ,,	0—1″	.001″
936/6	6″ ,,	0—1″	.001″

* **FRICTION THIMBLE MICROMETERS**

Can be supplied on all popular types of micrometers; when ordering suffix "F" to Catalogue Number.

MICROMETER
with pointed anvil and spindle 60°

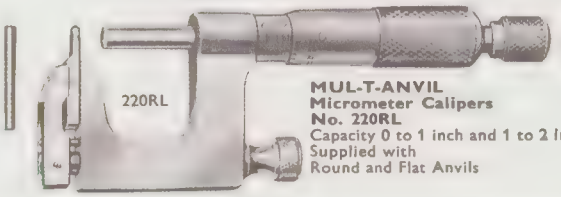
To measure fluted articles.

947 Capacity 0—¾″. Graduations .001″, with ratchet and locknut. Supplied in spring hinged pocket case.

MICROMETER
with flange anvil and spindle

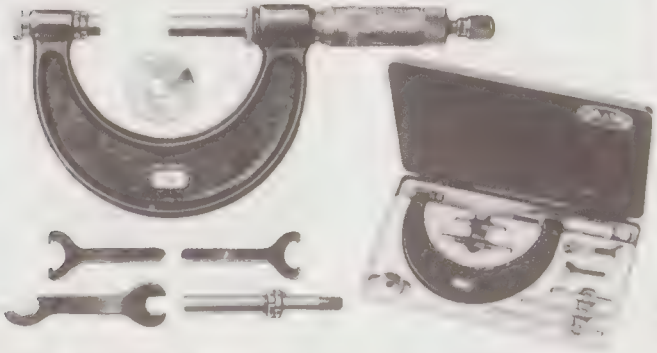
¾″ flanges for measuring paper, cloth, silk, rubber and any soft material.

961P Capacity 0—½″. Graduations .001, with ratchet and locknut. Supplied in spring hinged pocket case.



MUL-T-ANVIL
Micrometer Calipers
No. 220RL
Capacity 0 to 1 inch and 1 to 2 Inch
Supplied with
Round and Flat Anvils

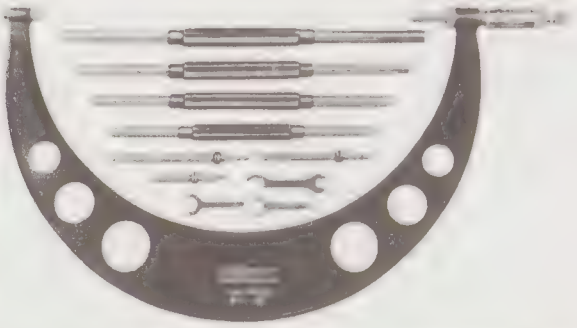
MICROMETERS



ADJUSTABLE MICROMETER with black crackle enamelled frame

These micrometers have a range from two to six times greater than the fixed anvil type. The range is obtained by the use of separate anvils which are accurately fitted to the frame, with ratchet and locknut. Supplied in spring hinged case.

No.	Capacity	Micrometer Setting Rod Gauges	Inter-changeable Anvils	Graduations
940X	0 —2″	1	2	.001″
941X	0 —4″	3	4	.001″
942X	2″—6″	4	4	.001″

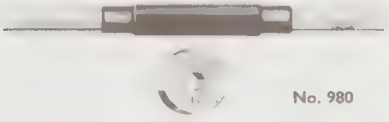


ADJUSTABLE MICROMETER with black crackle enamelled frame

Supplied with interchangeable anvils, ratchet and locknut.
Supplied in wooden case.

No.	Capacity	Micrometer Setting Rod Gauges	Inter-changeable Anvils	Graduations
943X	4″—8″	4	4	.001″
944X	6″—10″	4	4	.001″
945X	8″—12″	4	4	.001″
948X	12″—16″	4	4	.001″
949X	16″—20″	4	4	.001″
951X	20″—24″	4	4	.001″
1044X/6″	0″—6″	6	6	.001″
1044X/12″	6″—12″	6	6	.001″

Available in sizes up to 72″.



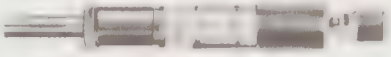
No. 980

No. 980 6″ Rod Gauge
No. 980 1″ Disc Gauge

MICROMETER SETTING GAUGES (BSS 870)

When buying micrometers with a range above 0—1″ or 0—25 mm., it is advisable to purchase the requisite setting gauge with each instrument, so that the setting can be checked each time before use.

1 inch	D.,
2	,, Rod
3	,, ,,
4	,, ,,
5	,, ,,
6	,, ,,
7	,, ,,
8	,, ,,
10	,, ,,
11	,, ,,
12	,, ,,



MICROMETER HEADS

For use in Jigs and Fixtures and Precision Measuring Instruments

952 Capacity 0—1″. Graduations .001″
952B Capacity 0—1″. Graduations .0001″

INSIDE MICROMETERS

Supplied with adjusting keys, in fitted case.

904 Capacity 8″—13″. Measuring range of head 1″ with .001″ graduations.
5 Interchangeable anvils.

905 Capacity 8″—18″. Measuring range of head 1″ with .001″ graduations.
5 Interchangeable anvils, 1 Distance piece, 5″ long.

906 Capacity 8″—23″. Measuring range of head 1″ with .001″ graduations.
5 Interchangeable anvils, 2 Distance pieces 5″ long.

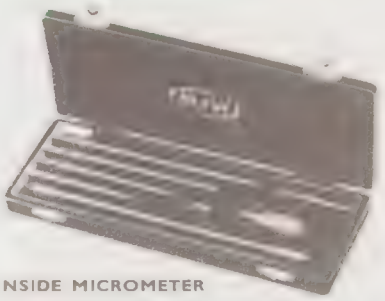
907 Capacity 8″—28″. Measuring range of head 1″ with .001 graduations.
5 Interchangeable anvils, 3 Distance pieces, 5″ long.

908 Capacity 8″—33″. Measuring range of head 1″ with .001″ graduations.
5 Interchangeable anvils, 4 Distance pieces, 5″ long.

Available up to 60″.

MICROMETER HOLDER

L1434 for adapting the smaller types of hand Micrometers for bench use.



INSIDE MICROMETER with detachable Handle

Supplied in spring hinged case.

901 Capacity 1″—2″ Measuring range .250″ with .001″ graduations.
2 Extension Rods, 1 Distance piece .250″ long.

902 Capacity 2″—8″. Measuring range .50″ with .001″ graduations.
6 Extension Rods, 1 Distance piece .50″ long.

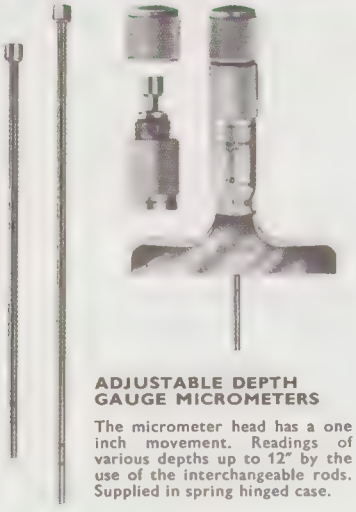
903 Capacity 2″—12″ Measuring range .50″ with .001 graduations.
10 Extension Rods, 1 Distance piece .50″ long

Available up to 40″.

BENCH MICROMETERS

Pearl chrome plated Micrometer heads, Black crackle enamelled frame fitted to hardwood stand.
Fitted with ratchet.
Supplied in wooden case.
Fitted with **Aluminium thimbles** for sensitive feel.

474 1½″ diameter thimble. Capacity 0—½″. Graduation .0001″ direct.
476 2⅝″ diameter thimble. Capacity 0—1″. Graduations .0001″ direct.



ADJUSTABLE DEPTH GAUGE MICROMETERS

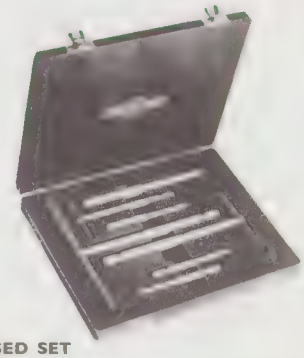
The micrometer head has a one inch movement. Readings of various depths up to 12″ by the use of the interchangeable rods. Supplied in spring hinged case.

891/3″	Capacity 0—3″ with 3 rods.
891/6″	Capacity 0—6″ with 6 rods.
891/9″	Capacity 0—9″ with 9 rods.
891/12″	Capacity 0—12″ with 12 rods. Diameter of rods ⅛″; Base 2½″; Graduation .001″
892/3″	Capacity 0—3″ with 3 rods.
892/6″	Capacity 0—6″ with 6 rods.
892/9″	Capacity 0—9″ with 9 rods.
892/12″	Capacity 0—12″ with 12 rods. Diameter of rods ¼″; Base 4″; Graduation .001″.

TELESCOPIC GAUGE

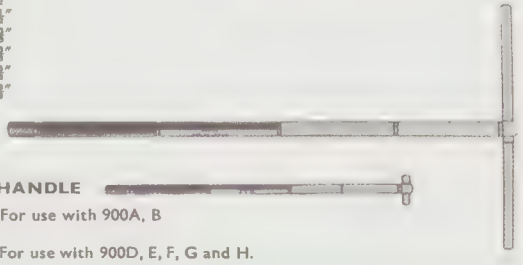
For use either as a comparator or for taking internal measurements in conjunction with an external micrometer.

	Capacity	Length
900A	½″—⅝″	3½″
900B	⅝″—1½″	3½″
900C	1½″—2⅛″	4⅜″
900D	2⅛″—3½″	6⅜″
900E	3½″—6″	6⅜″
900F	5½″—8″	6⅜″



CASED SET

900/4 One set containing one each 900A, B, C D and E Gauges, and one each 900Y and 900Z extension handles.



EXTENSION HANDLE

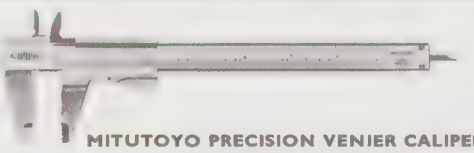
900Y 3½″ long. For use with 900A, B and C.

900Z 5½″ long. For use with 900D, E, F, G and H.

MITUTOYO VERNIER HEIGHT GAUGE

Vernier reading 1/1000″ x 1/50 mm

Range	No.	Base W x L
12″ x 300 mm	520-155	3.35″ x 4.9″
24″ x 600 mm	520-156	4.73″ x 7.1″
40″ x 1000 mm	520-157	5.9″ x 9.8″



MITUTOYO PRECISION VENIER CALIPERS

English		Metric/English	
Vernier scale 1/128″ x 1/1000″		Vernier scale 1/1000″ x 1/50 mm	
Range	No.	Range	No.
6″ x 6″	502-537	6″ x 150 mm	502-533
8″ x 8″	502-538	8″ x 200 mm	502-534
12″ x 12″	502-540	12″ x 300 mm	502-536

Dial reads directly to 1/1000″

Range (inch)	No.	Measuring capactiy (inch)
6	505-626	6 by .001
8	505-256	8 by .001
12	505-258	12 by .001

PRECISION VERNIER CALIPERS "ETALON"

Standard Vernier Caliper with Micrometer adjusting Screw.

Measuring Capacity	Graduated Length	Length of Jaws	Width of Nibs (closed)
in.	in.	in.	in.
* 5	7	1.5	.250
7	10	2.3	.250
12	16	3.1	.300
18	22	3.5	.300
* 24	28	3.5	.300
* 36	41	4	.500
* 48	58	5	.750
* 69	79	7.8	1.000
* 88	98	7.8	1.000
*108	118	7.8	1.000

* Not chromed—without rule on reverse

MITUTOYO GAUGE BLOCKS

Series 516

Ideal for checking accuracy of micrometers, vernier calipers; setting height gauges, dial indicators, etc.

No.	Size
516-102	.100″ .105″ .110″ .210″ .500″ 1.000″

Packed in a wooden case

BEVEL PROTRACTOR
with vernier graduations (BSS 1685)

Accurate to within 5 minutes of arc.
Both 6″ and 12″ blades have bevelled ends.

994A Vernier Bevel Protractor, with 6″ blade.
994C Vernier Bevel Protractor with 6″ and 12″ blades.

COMBINATION SETS

COMBINATION SET
with CAST IRON HEADS
and hardened and Tempered Rule

No. 9 Combination Set—Complete with square head non-reversible protractor centre head and rule in 12″, 18″, 24″.
Satin Chrome Rule — 9c

COMBINATION SET
with DROP FORGED STEEL HEADS
and hardened and tempered rule

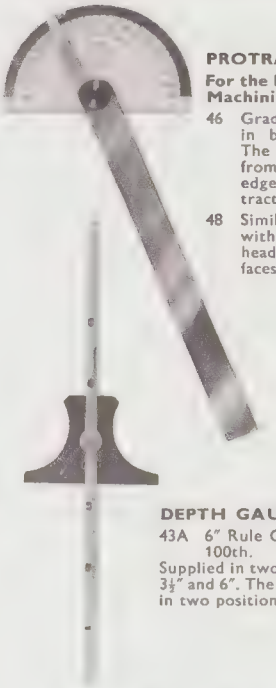
990P Combination Set—complete with square head, centre head, protractor and rule in 12″, 18″ and 24″ sizes.
Protractor graduated to read from 0 — 180° in both directions.

COMBINATION SET
with HARDENED DROP FORGED STEEL HEADS and hardened and tempered rule

992P Combination Set—complete with square head, centre head, protractor and rule in 12″, 18″ and 24″ sizes. Protractor graduated to read from 0—180° in both directions.

SPARE BLADES FOR COMBINATION SETS

12″, 18″ and 24″. Graduated 8th, 16th, 32nd, 64th.
Spare heads also available.



PROTRACTOR
For the Engineer and Machinist

46 Graduated 0—180° in both directions. The blade is 6″ long from the working edge of the protractor.
48 Similar to No. 46 but with a rectangular head giving 4 workfaces.

DEPTH GAUGE

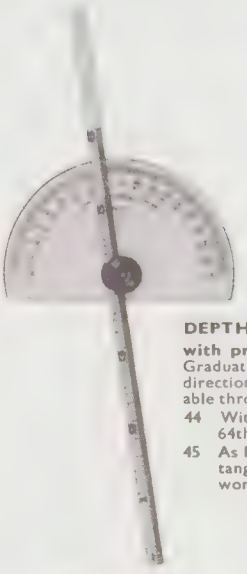
43A 6″ Rule Graduated, 64th, 100th.
Supplied in two lengths of base, 3½″ and 6″. The rule can be used in two positions in the base.

TOOLMAKER'S BUTTONS — No. 494

SPECIFICATIONS

Catalogue Number	No. of Buttons per set	Diam. Buttons	Length	
			Long Button	Other Buttons
No. 494A*	4	.300″	5/8″	1/2″
No. 494B*	4	.400″	3/4″	1/2″
No. 494C*	4	.500″	7/8″	1/2″

TAP (.125—40) For Use with No. 494A, B or C.
*NOTE: Furnished in complete sets of 4 buttons with screws, washers and base plate.



DEPTH GAUGE
with protractor

Graduated 0—180° in both directions. The rule is adjustable throughout its 6″ length.

44 With 6″ rule marked in 64ths and millimetres.
45 As No. 44, but with rectangular head, giving 4 working edges.

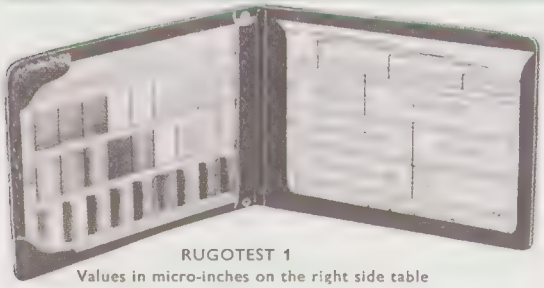
"LITTLE GIANT" JACK SCREWS
1½ to 3⅜ Inch.

No. 190 — No. 191 Series

No. 190 The Jack (A) is 1¼″ in diameter at the base and had a range from 2¼″ to 3⅜″. It will raise 1000 pounds. The two extension bases (B and C) are 2″ and 1″ high respectively.

An auxiliary pointed screw (D) is supplied to be used in place of the screw with swivel cap. Extension base (E) is furnished in places where it is not possible to obtain a bearing on a flat surface. Extension V base (F) is for use against a cylindrical form.

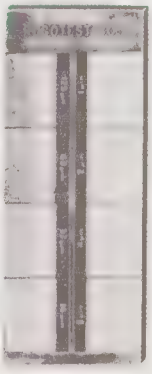
No. 191 The same as the No. 190 except smaller in size. Part A is 1 inch in diameter at the base and has range of 1½″ to 2½″. Extension bases B and C are 1″ and ½″ high respectively.



RUGOTEST 1
Values in micro-inches on the right side table

RUG 1 **RUGOTEST 1**

RUGOTEST 1 (4.7″ x 3.5″) comprises 27 specimens covering the following machining operations:
Side Milling — Face Milling — Turning — Planing — Grinding — Lapping — Super Finishing



RUGOTEST 105. Full size 5″ x 2″.

RUGOTEST 101
Full size 4.5″ x 2″

RUG 101 **RUGOTEST 101**

RUGOTEST 101 comprises six different specimens for planing

The specimens are so arranged that every one of them can be brought into contact with the workpiece.

Supplied in a leather case 4.5″ x 2.5″.

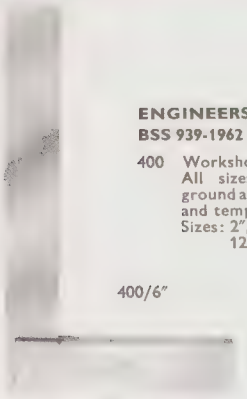
The same six-specimen specification is available for:

RUGOTEST 102 Turning

RUGOTEST 103 Face milling

and with eight-specimen (case 5.5 x 2.5″
RUGOTEST 104 Surface grinding

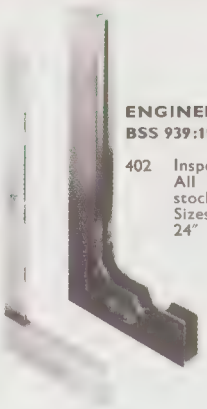
RUGOTEST 105 Cylindrical grinding



400/6″

ENGINEERS' SQUARE
BSS 939-1962 Grade B

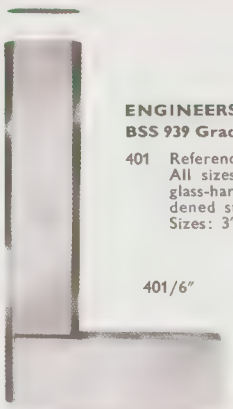
400 Workshop Grade Square. All sizes are precision ground and have hardened and tempered blades.
Sizes: 2″, 3″, 4″, 5″, 6″, 9″, 12″, 18″, 24″



402/18″ with Sheath

ENGINEERS' SQUARE
BSS 939:1962 Grade A

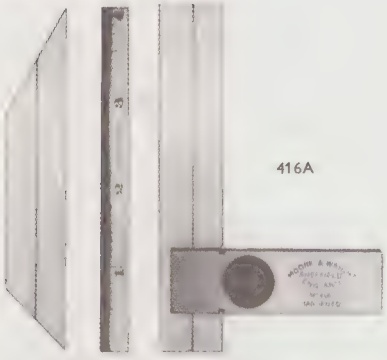
402 Inspection Grade Square. All sizes have hardened stocks and blades.
Sizes: 2″, 3″, 4″, 6″, 9″, 12″, 24″



401/6″

ENGINEERS' SQUARE
BSS 939 Grade AA (Ref.)

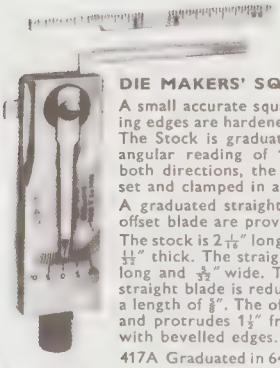
401 Reference grade square. All sizes have blades with glass-hard edges and hardened stocks.
Sizes: 3″, 4″, 6″, 12″.



416A

ADJUSTABLE TRY-SQUARE

416A All working faces hardened and ground. The 4″ long blade is hardened and tempered and the edges are precision ground. The stock is 2½″ long. Rule graduated in 64ths.



417

DIE MAKERS' SQUARE

A small accurate square. All working edges are hardened and ground. The Stock is graduated to give an angular reading of 10 degrees in both directions, the blades can be set and clamped in any position.

A graduated straight blade and an offset blade are provided.

The stock is 2 1/16″ long, 7/32″ wide and 11/32″ thick. The straight blade is 2¼″ long and 3/32″ wide. The end of the straight blade is reduced to 7/32″ for a length of ⅜″. The offset is ⅛″ wide and protrudes 1⅛″ from the stock, with bevelled edges.

417A Graduated in 64ths and 32nds

315S

TOOLMAKERS' STRAIGHT EDGES
with hardened working edges

315S Set of four, i.e. one each 2″, 3″, 4″, 6″, and one black glass test piece 6¼″ long in protective case.

The error on these Straight Edges does not exceed .001″ on any size.

ENGINEERS' STRAIGHT EDGES

Finished Ground on both sides and edges. Marked at supporting points on the 36″ size and upwards, conform to British Standard Specification 863, Grade 'B'. The bevel is 30°

National Physical Laboratory Certificate can be supplied at extra cost.

No. 308B. Not hardened.
LIGHT SECTION

Length	Width	Thickness
36″	2″	5/16″
48″	2½″	⅜″
60″	3″	7/16″
72″	3″	7/16″

1309R **GRADUATED STRAIGHT EDGES — Rustless**

Width and Thickness	Length
1½″ x .07″	12″, 18″, 24″
2″ x .09″	36″, 48″, 60″
2½″ x .09″	72″

Workshop Grade available. Plain or Graduated.

PIN VICES AND PIN CHUCKS

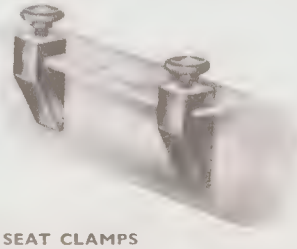
Number	Capacity	Length
PIN VICES (CHUCK TYPE)		
121	0 to .040	3
122	.030 to .062	3½
123	.050 to .125	3¾
124	.115 to .187	4⅛
120	Set of one each, Nos. 121, 122, 123, 124.	
PIN CHUCKS		
160	0 to 1/32 1/32 to 1/16 1/16 to 3/32	2½

411

TOOLMAKERS' CLAMPS

Case hardened steel, ground flat on all faces.

	Length of Jaws	Size of Jaws	Opening
410	2″	5/16″ sq.	1″
411	3″	7/16″ sq.	1½″
412	4″	9/16″ sq.	2½″
413	5″	11/16″ sq.	3½″

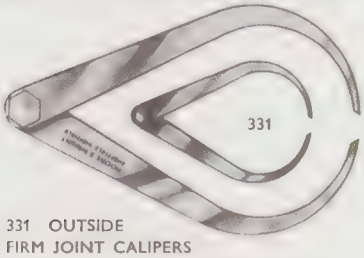


KEY SEAT CLAMPS

409 These clamps will transform a rule into key-seat, or box square.

FIRM JOINT CALIPERS

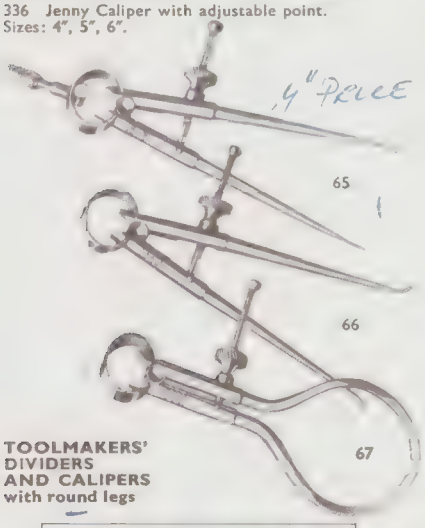
330 INSIDE
FIRM JOINT CALIPERS
Sizes: 4″, 6″, 8″, 10″, 12″, 15″, 18″, 24″, 30″



331 OUTSIDE
FIRM JOINT CALIPERS
Sizes: 4″, 6″, 8″, 10″, 12″, 15″, 18″, 24″, 30″

FIRM JOINT JENNY CALIPERS

336 Jenny Caliper with adjustable point.
Sizes: 4″, 5″, 6″.



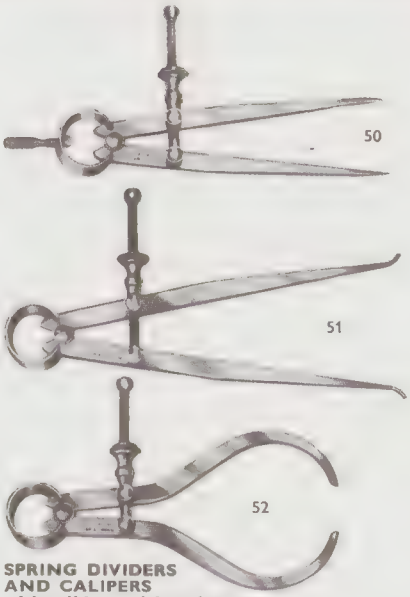
TOOLMAKERS' DIVIDERS AND CALIPERS with round legs

		Sizes:
65	Dividers	2″
66	Inside Calipers	3″
67	Outside Calipers	4″
		5″
		6″

AUTOMATIC CENTRE PUNCH

Can be adjusted to make a uniform impression of any size from a light dot to a heavy punch mark.

Catalogue No.	Overall Length in Inches
171	4½



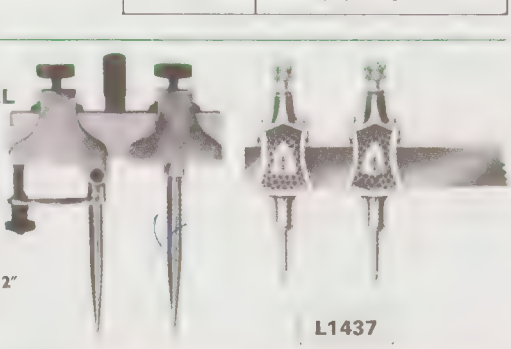
SPRING DIVIDERS AND CALIPERS with solid or quick acting nuts

Nominal size is the distance between the centre of the roller and the working ends of the legs.

Sizes:

50	Dividers, Solid Nut	3″ 4″ 5″ 6″ 8″ 10″ 12″
51	Inside Calipers, Solid Nut	
52	Outside Calipers, Solid Nut	
53	Dividers, Quick Acting Nut	3″ 4″ 5″ 6″ 8″ 10″ 12″
54	Inside Calipers, Quick Acting Nut	
55	Outside Calipers, Quick Acting Nut	

L1435 WING COMPASS
Length 8″, 10,″ 12″



TRAMMEL

UNIVERSAL SURFACE GAUGE
No. 405B
Base Size 3⅛″ x 2½″
Spindle Length 9″ and 12″
Spindle Diameter $\frac{5}{16}$″
Scriber Diameter $\frac{3}{64}$″

L1437

L1436 3″ Removable Points
⅜″ x ⅜″ Beam

SILVER STEEL POINTS
BRONZE BODY

ENGINEERS' SCRIBERS

No. 220 and 221 Two sizes of pocket scriber with detachable points which can be reversed and housed within the body of the tool.

No. 222 No. 223 and 224 Double-ended engineer's scriber. A double-ended and single-ended scriber respectively, with detachable points.

No. 225 Has a detachable tungsten carbide tipped point which, can be reversed and housed within the body of the tool.

The tungsten carbide point is interchangeable with the steel point of the No. 220 pocket scriber.

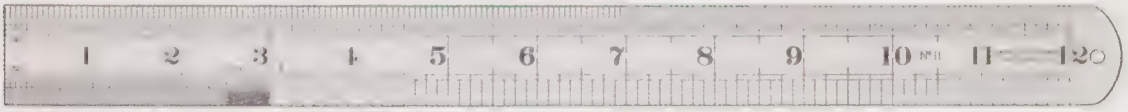
Catalogue No.	Overall Length in inches
220	5 open, 4½ closed
221	6½ open, 5 closed
222	7
223	8
224	5 5/16
225	4¾ open, 4⅜ closed

STEEL RULES

In Carbon or Rustless Steel
WIDE SECTION

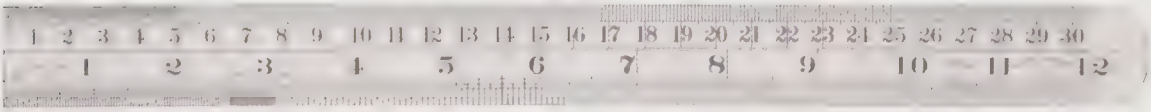
Width	$\frac{3}{4}$″	$1\frac{1}{8}$″	$1\frac{1}{8}$″	$1\frac{1}{8}$″	$1\frac{1}{2}$″	2″
Thickness	.03″	.04″	.06″	.06″	.07″	.09″
Length	6″	12″	24″	36″	48″	72″

Marked on One Side — Two Edges. No. 11, 12″.



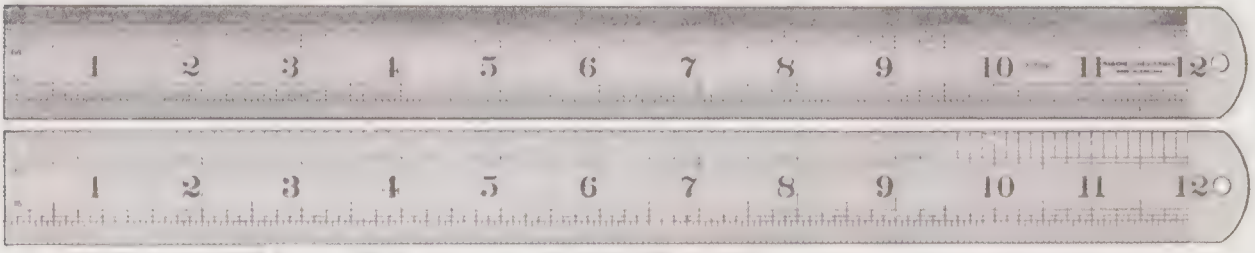
No. 11 Marked Inches into 16th, 8th, 32nd, 64th.
No. 34 Carbon No. 34 R Rustless. Marked Cms into mms. Inches into 16th, 32nd, 64th.

No. 34, 12″



PEARL CHROME — PRECISION RULES. Marked 4 Edges.
No. P421A Length 6″, Width $\frac{3}{4}$″, Thickness .04″. Marked $\frac{1}{32}$″, $\frac{1}{64}$″ one Side, $\frac{1}{8}$″, $\frac{1}{16}$″ Reverse Side.
Length 12″, Width 1″, Thickness .04″. Marked $\frac{1}{32}$″, $\frac{1}{64}$″ one Side, $\frac{1}{8}$″, $\frac{1}{16}$″ Reverse Side.

Marked on Two Sides — Four Edges. No. 28, 12″ (showing both sides of rule).



No. 28 Carbon No. 28R Rustless. Marked Inches into 16th, 8th, 32nd, 64th.
No. 64 Carbon No. 64R Rustless. Marked Inches into 16th, 32nd, 64th, 10th, 20th, 50th, 100th and cms into mm, cms into $\frac{1}{2}$mm.

STEEL RULES

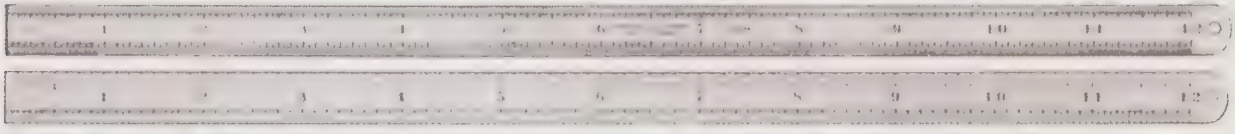
In Carbon or Rustless Steel
NARROW AND FLEXIBLE

Width	$\frac{1}{2}$″	$\frac{1}{2}$″	$\frac{3}{4}$″
Thickness	.02″	.02″	.02″
Length	6″	12″	24″

English and Metric on one side (two edges). No. 34F, 12″.

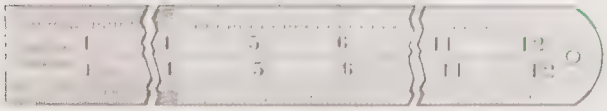
No. 34F Carbon No. 34FR Rustless. Marked Inches into 16th, 32nd, 64th cms into mm.

English on Two Sides — 4 Edges No. 28F, 12″ (showing both sides of rule).



No. 28F Carbon No. 28FR Rustless. Marked Inches into 16th, 32nd, 64th, 10th, 20th, 50th, 100th. 6″ and 12″ only.

CONTRACTION RULES



Normal Contraction for Wood Patterns:
Cast Iron $^1/_{120}$, Steel and Brass $^1/_{60}$, Aluminium $^1/_{77}$,
Malleable Iron $^1/_{96}$, Stainless Steel $^1/_{48}$, Manganese $^1/_{38}$.

Width	$\frac{1}{2}$″	$1\frac{1}{8}$″	$1\frac{1}{8}$″
Thickness	.02″	.04″	.06″
Length	6″	12″	24″

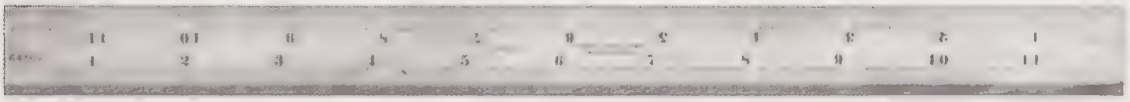
No. 713 Contraction $^1/_{120}$, $^1/_{70}$, $^1/_{64}$. Marked 16th, 32nd.
No. 717 Contraction $^1/_{120}$, $^1/_{60}$. Marked 16th, 10th.
No. 718 Contraction $^1/_{96}$, $^1/_{77}$, $^1/_{48}$, $^1/_{38}$. Marked Contraction only.

STEEL RULES

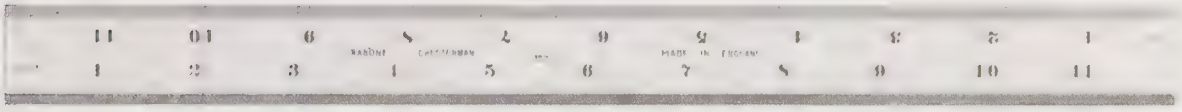
In Carbon or Rustless Steel with Square Ends, Dead Length Standards
WIDE SECTION

Width	$\frac{3}{4}$″	1″
Thickness	.03″	.04″
Length	6″	12″

English or English and Metric on two sides (four edges). No. 29, 12″



No. 31, 12″ (showing both sides of rule).



No. 29 Carbon No. 29R Rustless. Marked Inches into 16th, 8th, 32nd, 64th, with 32nd and 64th numbered.
No. 31 Carbon No. 31R Rustless. Marked Inches into 10th, 20th, 50th, 100th.
No. 37 Carbon No. 37R Rustless. Marked Inches into 8th, 16th, 64th and cms into mm.

PEARL CHROME — PRECISION RULES

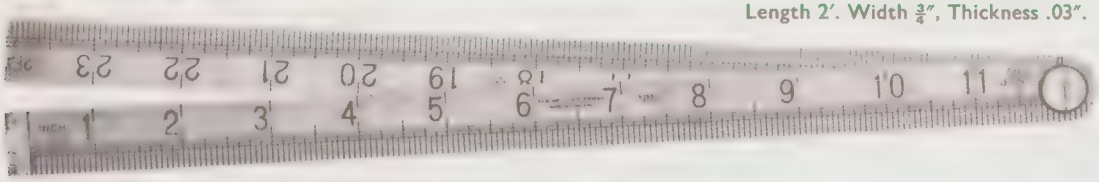
P422A, 6″ or 12″, Thickness .04″. Marked 32nd, 64th one side. 8th, 16th reverse side.
P427A, 6″ or 12″, Thickness .04″. Marked 32nd, 64th one side. 8th, 16th reverse side.
P422M 150 mm or 300 mm, Thickness 1 mm. Marked 1 mm. and $\frac{1}{2}$ mm both sides.

NARROW AND FLEXIBLE

English or English and Metric on two sides (four edges). Width $\frac{1}{2}$″, Thickness .02″.
No. 29F Carbon No. 29FR Rustless. Lengths 6″ and 12″.
Marked Inches into 32nd, 64th, 16th, 8th. With 32nd and 64th numbered.

FOLDING STEEL RULES

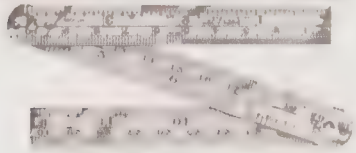
Length 2′. Width $\frac{3}{4}$″, Thickness .03″.



No. 52 Carbon No. 52R Rustless, Stop Joint Tipped. Marked Inches into 8th, 16th.
No. 54 Carbon No. 54R Rustless, Stop Joint Tipped. Marked Inches into 8th, 16th, 32nd, 64th.
No. 56 Carbon No. 56R Rustless, Spring Joint Not Tipped. Marked Inches into 8th, 16th, 32nd, 64th.
No. 57 Carbon No. 57R Rustless, Stop Joint Tipped. Marked Inches into 16th and mm.

LINE OF CHORDS and CIRCUMFERENCE RULE $\frac{7}{8}$″ Wide, Thickness .04″.
No. 58 Carbon No. 58R Rustless. Marked Inches into 8th, Circumferences into 8th, inches into 8th, 16th, Line of Chords.

MULTIFOLD STEEL RULES

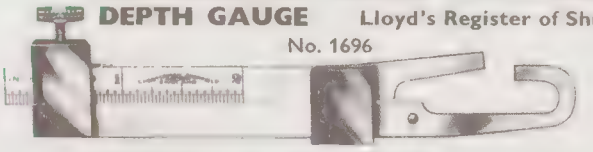


No. 50, 1 foot.

Width $\frac{1}{2}$″
Thickness .02″
No. 50 Carbon
No. 50R Rustless
Marked Inches in 16th, 32nd, 64th and mm. and halves.

COMBINATION BOILER PLATE AND DEPTH GAUGE

Lloyd's Register of Shipping
No. 1696

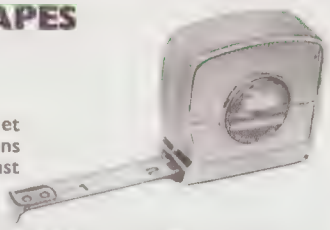


Capacity 2″. Marked one side 20th, other side 32nd of Inch.

MEASURING TAPES

'MEZURMATIC'
WHITE CLAD

Push-button spring return. Jet black figures and graduations and red foot markings against white background.



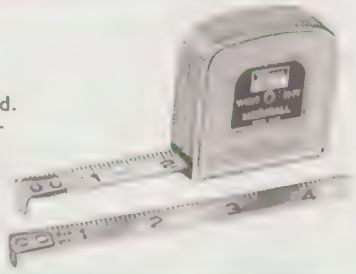
Type	Length	Width	Markings	Tape Cat. No.	Refill Cat. No.
'Mezurall' White Clad	6′	½″	1/16″ and ⅛″	W926	RW6
	78¾″	⅓″	Metric	W926ME	RW6ME
	8′	⅓″	1/16″ and ⅛″	W928	RW8
	10′	⅓″	1/16″ and ⅛″	W9210	RW10
	118¼″	⅓″	Metric	W9210ME	RW10ME
	12′	⅓″	1/16″ and ⅛″	W9212	RW12
	10′	¾″	1/16″ and ⅛″	W9310	RW310
	12′	¾″	1/16″ and ⅛″	W9312	RW312
'Mezurall' Chrome Clad	6′	½″	1/16″ and ⅛″	C926	RC6
	78¾″	½″	Metric	C926ME	RC6ME
	10′	½″	1/16″ and ⅛″	C9210	RC10
	118¼″	½″	Metric	C9210ME	RC10ME
	12′	½″	1/16″ and ⅛″	C9212	RC12
	10′	¾″	1/16″ and ⅛″	C9310	RC310
	12′	¾″	1/16″ and ⅛″	C9312	RC312
'Mezurmatic' White Clad	6′	½″	1/16″ and ⅛″	W726	RW6
	10′	½″	1/16″ and ⅛″	W7210	RW10
	12′	½″	1/16″ and ⅛″	W7212	RW12
	10′	¾″	1/16″ and ⅛″	W7310	RW310
	12′	¾″	1/16″ and ⅛″	W7312	RW312

'MEZURALL'

Push-pull manually operated. Available in two finishes —

WHITE CLAD — Jet black figures and graduations, red foot markings against white background.

CHROME CLAD — Jet black markings and graduations against chrome satin background.



THE "INTERFLEX" RULE

Blade ½ inch wide
No. 315

THE "WHITEFLEX" RULE

Blade ½ inch wide
No. 344

Number	Length	Marking	Refill Tape No.
315	2 m/ 6 ft 3 m/10 ft	Consecutive inches in 16ths top edge, cms. into mms. bottom edge figured every cm. and metre.	P5/2m P5/3m
344	6 ft 10 ft 12 ft.	Feet and inches in 16ths top edge, consecutive inches in 16ths bottom edge (first 12 inches into 32nds).	W4/6 W4/10 W4/12
345	2 m/ 6 ft 3 m/10 ft	Consecutive inches in 16ths top edge, cms. into mms. bottom edge figured every cm. and metre.	W5/2m W5/3m

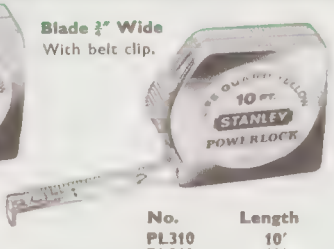
"POWERLOCK"

Blade ¼" and ⅜" Wide
Power Return Rule with yellow blade.
Blade locks for controlled measuring.
With belt clip.

No.	Length	With Metric and English Blades	
PL6	6′	P2ME	2M
PL10	10′	P3ME	3M
PL12	12′		

Blade ⅜" Wide

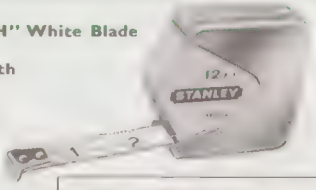
With belt clip.



No.	Length
PL310	10′
PL312	12′
PL316	16′

"PULL-PUSH" White Blade ½" Wide

No.	Length
W 6	6′
W10	10′
W12	12′



DIAMETER TAPE

No. 30/104 Length 6 ft, Width ½" Marked Inches into 16th one Side Diameter 32nd other Side.

WHITE STEEL TAPE

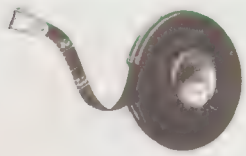
Number	Width	Marking	Length	Refill Tape No.
22W/1	⅜″	Feet Inches 8th	33′, 66′, 100′	Rf22W/1
22W 5	⅜″	Meters into Cms	10, 20, 30m	Rf22W/5
23W/1	½″	Feet Inches 8th	33′, 66′, 100′	Rf23W/1

No. 431/1, ½" wide

BLACK ETCHED STEEL DIPPING TAPES

On Brass Frames with Weight Attachment

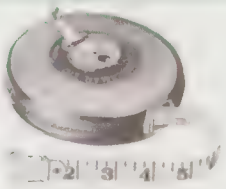
½" wide x .010" thick 431/1 Marked One side only with feet, Inches in 8th. Length 50′, 100′.



No. 435/1, ⅜" wide

BLACK ETCHED STEEL TAPE IN STEEL CASE

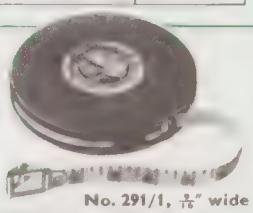
Length 33′, 66′, 100′
Marked one side with feet inches in 8ths.



No. 251/14 ½" wide.

WOVEN MEASURING TAPE — Plastic Coated IN LEATHER CASE

Length 33′, 66′, 100′
Marked feet inches in ¼ inch one side. Links other side.



No. 291/1, 1/16" wide

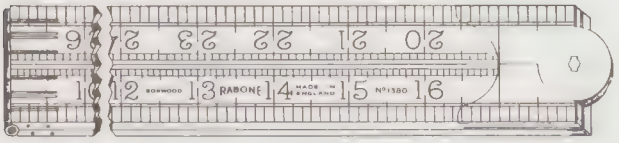
FIBRON MEASURING TAPE. P.V.C. Coated.

PLASTIC COATED STEEL CASE

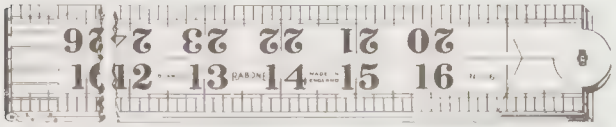
Length 33′, 66′
Marked one side with Feet Inches in ¼ inch.

BOXWOOD RULES

FOUR FOLD BOXWOOD RULES

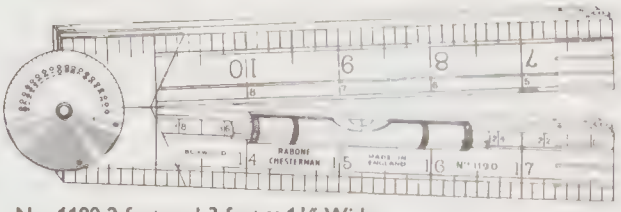


No. 1380 2 feet and 3 feet x 1½" Wide. Marked Inches in 8ths, 16ths, 10ths, 12ths.



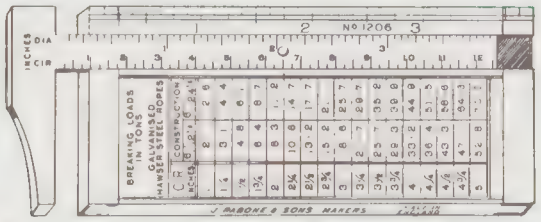
No. 1167 "BLINDMAN'S" 2 feet and 3 feet x 1⅜" Wide. Marked Inches in 8ths, 16ths.

With Spirit Level and Circle of Degrees

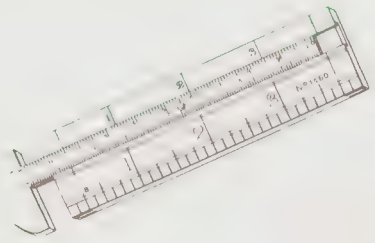


No. 1190 2 feet and 3 feet x 1½" Wide.
Marked Inches in 8th, 16th and 4 Scales.

BOXWOOD AND BRASS CALLIPER GAUGES



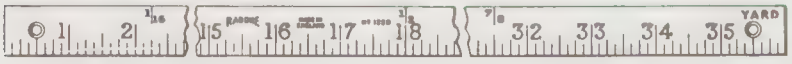
No. 1206
No. 1207



No. 1460

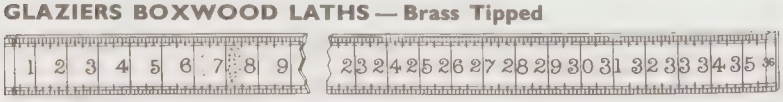
No.	Description	Length
1206	Boxwood Rope and Chain Gauge. Marked Circumference and Diameter Scales on slide. Tables of Breaking Loads of Steel Ropes one side and weight of Manilla and Hemp Ropes on other side	4"
1207	As pattern No. 1206	6"
1460	Boxwood Calliper Gauge. Marked 32nds on Brass Slide and inches in 8ths and 16ths on Gauge	4"
1462	As pattern No. 1460	3"
1461	As pattern No. 1460 but marked English Lines (40ths) on Slide	3"
1463	Boxwood Calliper Gauge with Jaws of Calliper designed for taking Inside and Outside measurements. Marked 32nds on Brass Slide and inches in 8ths and 16ths on reverse of Gauge.	4"
1464	As pattern No. 1463	5½"
1465	Boxwood Calliper Gauge with Extra Large Jaws, 1½" deep. Marked 32nds on Brass Slide and inches in 8ths on reverse of Gauge.	4"
1466	Brass Calliper Gauge. Marked inches in 32nds and millimetres	3½"

BRASS COUNTER MEASURES



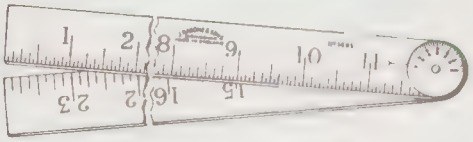
No. 1320 Marked Inches, 8ths and parts of a yard. Length 36", width ¾".

GLAZIERS BOXWOOD LATHS — Brass Tipped



No. 1136 1¾" Wide x $\frac{3}{16}$" Thick. Marked with 4 Lines inches in 8ths. Lengths 24" — 72".

TWO FOOT TWO FOLD BRASS RULES



No. 1243. Length 2 feet, Width ¾". Marked Inches 8ths and 16ths.

FEELER GAUGES

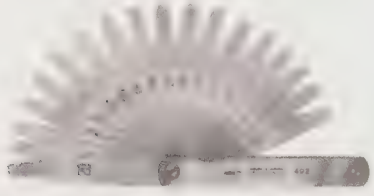
PRECISION FEELER GAUGE

32 4" Taper. Eight blades, one each 2, 3, 4, 6, 8, 10, 12, 15/1,000ths of an inch.

124 3" Taper. Ten blades, one each 1½, 2, 3, 4, 6, 8, 10, 12, 15, 25/1,000ths of an inch.

122 3" Parallel. Ten blades, one each 1½, 2, 3, 4, 6, 8, 10, 12, 15, 25/1,000ths of an inch.

132 4" Taper. Ten Blades, one each 1½, 2, 3, 4, 6, 8, 10, 12, 15, 25/1,000ths of an inch.



492 3" Taper. Eighteen blades one each 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 12, 15, 20, 25/1,000ths of an inch.

493 4" Taper. Eighteen blades one each 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 12, 15, 20, 25/1,000ths of an inch.

No. 245 ENGINEERS TAPER WIRE AND THICKNESS GAUGE

TAPER GAUGE. Calibrated one side in $\frac{1}{64}$" to $\frac{3}{16}$" on the other side as 3" rule in $\frac{1}{8}$" and $\frac{1}{16}$".

WIRE GAUGE. Birmingham Standard Calibrated one side from 19 to 36 also $\frac{1}{16}$" and $\frac{1}{8}$" and on the other side decimal equivalents in 1000ths of an inch.

FEELER GAUGE. Length of Blade 4½" Blade thicknesses in 1000ths of an inch. 2, 3, 4, 6, 8, 10, 12, 15 and $\frac{1}{16}$".

DOUBLE ENDED FEELER GAUGE

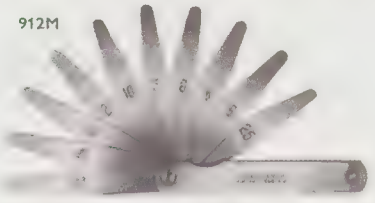
495 3" Taper, Eighteen Blades.
At one end one each 2, 4, 6, 8, 10, 12, 15, 20, 25/1,000ths of an inch. At opposite end, one each 1½, 3, 5, 7, 9, 11, 14, 19, 24/1,000ths of an inch.

496 4" Taper. Eighteen Blades.
At one end of each 2, 4, 6, 8, 10, 12, 15, 20, 25/1,000ths of an inch. At opposite end one each 1½, 3, 5, 7, 9, 11, 14, 19, 24/1,000ths of an inch.

FEELER STRIP

Supplied in 12" lengths, ½" wide with rounded ends, etched with the thickness size 2" from one end.
Available in the following thicknesses:
126 1, 1½, 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39 and 40/1,000ths of an inch.

"SAFE & SURE" FEELER GAUGE



911M 100 mm taper,Ten Blades. 1 each — 5, 10, 15, 20, 30, 40, 50, 60, 70, 80/100ths mm.

912M 75 mm Taper. Ten Blades. 1 each — 5, 10, 15, 20, 30, 40, 50, 60, 70, 80/100ths mm.

1106 6" Taper. Ten Blades, 1 each — 1½, 2, 3, 4, 6, 8, 10, 12, 15, 25/1,000ths of an inch.

1106M 150 mm Taper. Ten Blades, 1 each — 5, 10, 15, 20, 30, 40, 50, 60, 70, 80/100ths mm.

1109 9" Taper. Ten Blades, 1 each — 1½, 2, 3, 4, 6, 8, 10, 12, 15, 25/1,000ths of an inch.

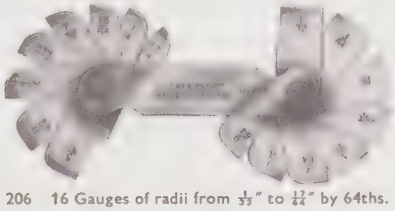
1112 12" Taper. Ten Blades, 1 each — 1½, 2, 3, 4, 6, 8, 10, 12, 15, 25/1,000ths of an inch.

RADIUS GAUGES

with internal and external radii

204 16 Gauges of radii from $\frac{1}{32}$" to $\frac{17}{64}$" by 64ths, fitted on a ring.

204A 16 Gauges of radii from $\frac{9}{32}$" to $\frac{33}{64}$" by 64ths, fitted on a ring.



206 16 Gauges of radii from $\frac{1}{32}$" to $\frac{17}{64}$" by 64ths.

206A 16 Gauges of radii from $\frac{9}{32}$" to $\frac{33}{64}$" by 64ths.

207 20 gauges of decimal radii from .020" to .400" inclusive, in the following range, .020", .030", .040", .050", .060", .070", .080", .090", .100", .125", .150", .175", .200", .250", .300", .350" and .400".
The three larger sizes having individual gauges for inner and outer radii.

208 30 Gauges comprising 15 each external and internal blades radii from $\frac{1}{32}$" to $\frac{1}{2}$" by 64ths.

208A 32 Gauges comprising 16 each internal and external blades radii from $\frac{17}{64}$" to $\frac{1}{2}$" by 64ths.

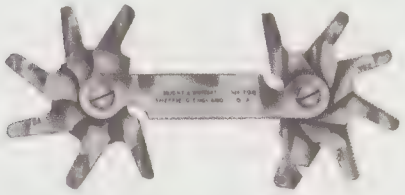
SCREW-CUTTING GAUGE

200 60 degrees United States Standard and System International, 55 degrees Whitworth, 47½ degrees British Association and 14½ degrees Acme.

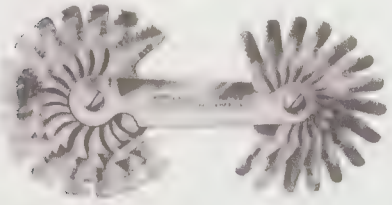
SCREW PITCH GAUGES

SCREW PITCH GAUGE

For Whitworth, American National, British Association, Unified and Metric Threads.
Designed to check internal and external Threads.



798 (B.A.) Screw Pitch Recognition Gauge of 12 blades, comprising one 47½° screwcutting gauge, and one blade each, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 B.A. Blades.



799 (Amern. Natl.) This Screw Pitch Recognition Gauge is suitable for V and U.S.S. forms of thread. It has 30 blades comprising one blade each 4, 4½, 5 5½ 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42 T.P.I.

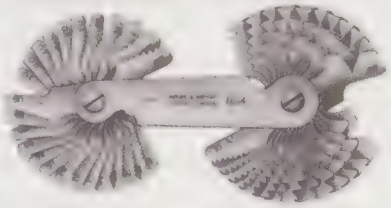
800 (Whit.) Screw Pitch Recognition Gauge of 28 blades comprising one 55° screw-cutting gauge and one blade each, 4, 4½, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48 and 60 T.P.I.
This gauge is suitable for B.S.W. (Whitworth) and B.S.F ranges of thread, and also for any other range with a basic Whitworth form, e.g. B.S.P. (Gas) Thread.

Metric Threads

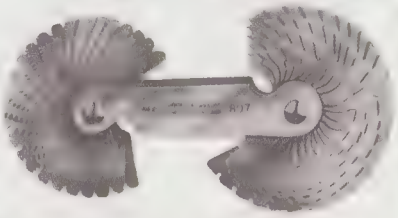
801 **Metric.** Thirty blades — one each 0.25, 0.3, 0.35, 0.4, 0.45, 0.5, 0.55, 0.6, 0.65, 0.7, 0.75, 0.8, 0.85, 0.9, 1.0, 1.1, 1.2, 1.25, 1.3, 1.4, 1.5, 1.6, 1.7, 1.75, 1.8, 1.9, 2.0, 2.5, 3.0 mm and one 60° screw-cutting gauge.

COMBINATION SCREW PITCH GAUGE

Two different threads in each tool.



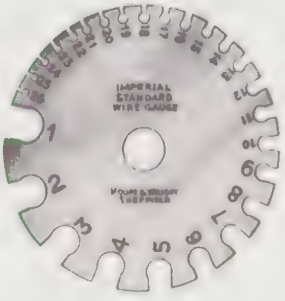
804 Whitworth and Metric Screw Pitch Gauge.
Whitworth Section as No. 800, one 55° thread-cutting tool gauge and 1 blade each 4, 4½, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48 and 60 T.P.I.
Metric Section one 60° thread-cutting tool gauge and 1 blade each 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1.0, 1.25, 1.5, 1.75, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5 and 7.0 mm.



807 Unified and Metric Screw Pitch Gauge.
Unified Section comprising 1 blade each, 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38 40 and 42 T.P.I.
Metric Section one 60° thread-cutting tool gauge and 1 blade each 0.4, 0.5, 0.7, 0.75, 0.8, 0.9, 1.0, 1.25, 1.5, 1.75, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0 mm.

808 Unified and Whitworth Screw Pitch Gauge.
Unified Section comprising 1 each 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40 and 42 T.P.I.
Whitworth Section comprising one 55° screw cutting gauge and 1 each 4, 4½, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 36, 40, 48 and 60 T.P.I.

WIRE GAUGES



IMPERIAL STANDARD WIRE GAUGE

1051 Single Circular 1—26. Gauge.

1052 Single Circular 1—36 Gauge

DOUBLE CIRCULAR WIRE GAUGE

1054 Double Circular 1—16 Gauge.

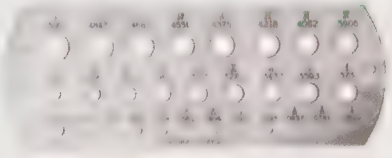
1055 Double Circular 1—36 Gauge.

OBLONG WIRE GAUGE

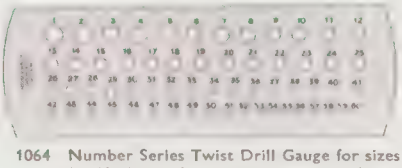
1057 Oblong 1—26 Gauge.

1058 Oblong 1—36 Gauge.

DRILL GAUGES



1059 Jobbers Drill Gauge from $\frac{1}{16}$" to $\frac{1}{2}$" by 64ths.



1064 Number Series Twist Drill Gauge for sizes 1—60. Decimal equivalent sizes are shown on reverse side.

1065 Letter Series Twist Drill Gauge for sizes A to Z. Decimal equivalents are shown on reverse side.

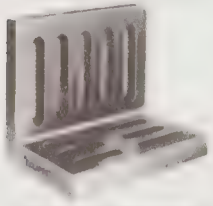
ANGLE PLATES

WEBBED-END

Machined on the outside faces and ends within the following tolerances:

Squareness of faces:	.001″ per foot
Squareness of ends to faces:	.002″ per foot
Edges parallel to faces:	.001″
Flatness of faces:	.001″

Catalogue No.	Length in inches	First Angle in inches	Second Angle in inches
199	3	2½	2
200	3½	3	2½
201	4½	2½	3
202	6	5	4½
203	7	5½	4½
204	8	6	5
205	9	7	6
206	10	8	6
207	12	9	8



OPEN-END

Machined on all faces within the following tolerances:

Squareness of faces:	.0015″ per foot
Squareness of ends to faces:	.002″ per foot
Edges parallel to faces:	.001″
Flatness of faces:	.001″
Faces parallel, inside to outside:	002″ per foot

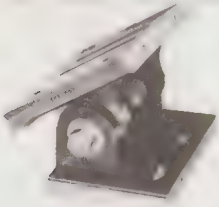
Catalogue No.	Length in inches	First angle in inches	Second angle in inches
301	4½	3½	3
302	6	5	4½
303	7	5½	4½
304	8	6	5
305	9	7	6
306	10	8	6
307	12	9	8

BOX TYPE

Machined on all outside faces within the following tolerances:

Any 2 faces parallel:	.0005″
Squareness of any 2 faces:	.001″

Catalogue No.	Length in inches	Breadth in inches	Height in inches
321	3	2½	2
322	4	3⅜	2¾
323	5	4¼	3⅜



SWIVEL TYPE

Machined on all outside faces and edges.
The calibrated insert permits the degree of angularity to be indexed.

Catalogue No.	Length in inches	Breadth in inches	Height with faces parallel
311	5	3¾	3
312	7	5	4

VEE BLOCKS

Supplied in matched and numbered pairs, machined within the following tolerances and with the 90° vee truly centred.

Vees parallel to base, single block:	.0005″
Vees parallel to base, in pairs, measured over a bar 12″ long:	.001″
Squareness of each block:	.001″
Width of blocks, in pairs:	.001″
Faces parallel:	.002″

Catalogue No.	Width in inches	Height in inches	Thickness in inches	Capacity within vee in inches
211	3	2¼	1¼	2½ diam.
212	4	3	1½	3½ diam.
213	5	3½	1¾	4 diam.
214	6	4	2	5 diam.
215	7	5	2¼	6 diam.
216	8	6	2½	7 diam.

VEE BLOCKS AND CLAMPS

No. 231

The set comprises a precision-matched and numbered pair of vee blocks and a pair of malleable iron clamps with steel screws.

The vee blocks are manufactured from case-hardened steel. All working surfaces are ground square to one another within a tolerance of .0003″. The vees are central and parallel, and square to the ends, to within the same tolerance.

No. 230

For general purpose use, the set comprises a matched and numbered pair of cast-iron vee blocks with 90° vees and malleable iron clamp with steel screw.

Catalogue No.	Dimensions of blocks in inches	Capacity (with clamp) in inches
231	1⅜ x 1¼ x 1¼	1 diam.
230	2 x 1½ x 1½	1½ diam.

STEEL PARALLELS

Hardened and Ground
⅛″ x 1″ to ⅜″ x ½″

No. 384K

No. S384K Set of four pairs of Parallels in protective wood case 6″ long. Sizes ⅛″ x 1″, ⅛″ x 1 3/16″, ¼″ x ¾″, ⅜″ x ½″

ENGINEERS' IRON SPIRIT LEVELS

No. 97
- 6″ With Plain Main Vial and Cross Test Vial
- 8″ With Plain Main Vial and Cross Test Vial
- 12″ With Plain Main Vial, Cross Test Vial and Single Plumb Vial

No. 98
- 6″ With Ground and Graduated Main Vial, and Cross Test Vial
- 8″ With Ground and Graduated Main Vial, and Cross Test Vial
- 12″ With Ground and Graduated Main Vial, Ground Single Plumb Vial, and Cross Test Vial
- 18″ With Ground and Graduated Main Vial, Ground Double Plumb Vial, and Cross Test Vial

No. 1387 Lengths, 6″, 9″, 12″, 18″, 24″

No. 133

Fitted with — Adjustable incline Level and Fixed Level and Plumb Graduated to read in $\frac{1}{16}$″ per foot Incline, up to 2″ per foot. Lengths 10″ and 15″.

MASTER PRECISION LEVEL

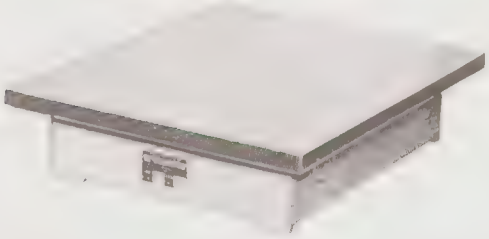
No. 199

For Setting Up, Checking and Testing Machinery

Length of Base 15″.
Width of Base $1\frac{3}{8}$″
Height 3″

L1438 SURFACE PLATES

Cast Iron and Australian Black Granite



SIZE	
Inch	Feet
6 x 4	3 x 2
8 x 8	3 x 3
12 x 8	4 x 2
12 x 12	4 x 2½
18 x 12	4 x 3
18 x 18	4 x 4
24 x 18	5 x 3
24 x 24	5 x 4
30 x 24	6 x 3
	6 x 4
	8 x 4
	10 x 5
	10 x 6

LAB. GRADE GRANITE ONLY	"A" GRADE CAST IRON & GRANITE (817-1957)	"B" GRADE CAST IRON & GRANITE (817-1957)	FINE MACHINE CAST IRON ONLY (817-1938-"D")
As well as conforming to B.S.817. Local error is limited to the follow- tolerances:	Lab. Grade	"A" Grade	"B" Grade	Fine Machine Grade
	.0001 in any square foot	.0002 in any square foot	.0008 in any square foot	.0010 in any square foot

L1439 SURFACE PLATE STANDS

Angle Iron and Cabinet Type
For Surface Plates
18″ x 18″ and larger

L1440 HAND LAPPING PLATES

Round and Square

Size	Weight
5″ Diam.	4 lb.
10″ Diam.	19 lb.
15″ Diam.	47 lb.
18″ Diam.	66 lb.
4″ Square	3 lb
6″ Square	8 lb
8″ Square	17 lb
12″ Square	34 lb

Also Available

Angle Plates,
Even Angle and Uneven Angle
Universal Right Angle Plates
Internal Faced Angle Plates
Measuring Squares
Box Angle Plates and Box Parallels
Straightedges — Bow Shaped and "I" Section
Cylinder Squares
Height Blocks

L1441 DRILL JIG BUSHES

conforming to BS1098-1953

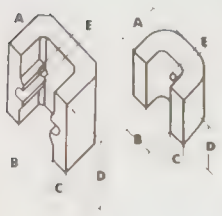
LINER TYPE Headless or Headed, $\frac{5}{16}$″ bore x $\frac{5}{16}$″ long to $2\frac{1}{4}$″ bore x $1\frac{3}{4}$″ long.

RENEWABLE Fixed or Slip $\frac{3}{64}$″ x $\frac{3}{16}$″ long to $1\frac{3}{4}$″ bore x $1\frac{3}{4}$″ long.

PRESS FIT TYPE Headless or Headed, $\frac{3}{64}$″ bore x $\frac{5}{16}$″ long to $1\frac{3}{4}$″ bore x $1\frac{3}{4}$″ long.

CLAMPING SCREWS for use with Flush Fitting and Headed Liners screwed $\frac{5}{16}$″ or $\frac{3}{8}$″ Whitworth, B.S.F. or U.N.C. Thread.

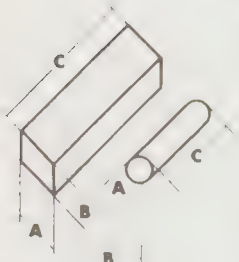
MAGNETIC TOOLS



POWER MAGNET

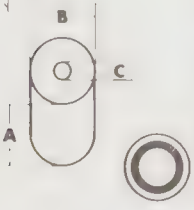
Cat. No.	Dimensions Inches				
	A	B	C	D	E
811	$\frac{3}{4}$	$\frac{9}{16}$	$\frac{5}{16}$	$\frac{3}{4}$	$\frac{5}{32}$
812	1	$\frac{1}{4}$	$\frac{3}{8}$	1	$\frac{7}{16}$
813	$1\frac{1}{8}$	$\frac{7}{16}$	$\frac{7}{16}$	$1\frac{1}{8}$	$\frac{7}{16}$
814	$1\frac{1}{8}$	$1\frac{1}{4}$	$\frac{7}{16}$	$1\frac{1}{2}$	$\frac{5}{16}$
815	$1\frac{3}{8}$	$1\frac{5}{8}$	$\frac{9}{16}$	$2\frac{1}{4}$	$\frac{5}{16}$
816	$2\frac{1}{8}$	$1\frac{7}{8}$	$\frac{5}{8}$	$3\frac{1}{4}$	$\frac{3}{8}$

HOLE CENTRES 814 $1\frac{1}{4}$" 815 $1\frac{1}{2}$" 816 $1\frac{11}{16}$"



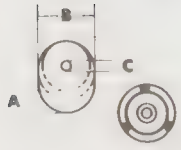
BAR MAGNET

Cat. No.	Dimensions Inches		
	A	B	C
805	$\frac{1}{4}$ diam.	—	$\frac{13}{16}$
806	$\frac{3}{16}$ diam	—	1
807	$\frac{3}{8}$ diam.	—	$1\frac{3}{16}$
844	$\frac{3}{8}$	$\frac{3}{16}$	$\frac{13}{16}$
845	$\frac{1}{2}$	$\frac{7}{16}$	$1\frac{9}{16}$
846	$\frac{5}{8}$	$\frac{7}{16}$	$2\frac{1}{8}$
842	$\frac{5}{8}$	$\frac{5}{8}$	2
843	$\frac{5}{8}$	$\frac{5}{8}$	3



POT MAGNET

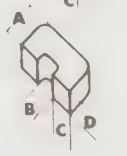
Cat. No.	Dimensions Inches		
	A	B	C
831	$\frac{5}{8}$	$\frac{11}{16}$	Tapped Hole OBA/6 SI or 10 NF
832	$\frac{3}{4}$	$\frac{13}{16}$	
833	1	$1\frac{1}{16}$	
834	$1\frac{3}{16}$	$1\frac{3}{8}$	



SHALLOW POT MAGNET

Cat. No.	Dimensions Inches		
	A	B	C
826	$\frac{5}{16}$	$\frac{3}{4}$	$\frac{9}{64}$
827	$\frac{3}{8}$	$1\frac{1}{8}$	$\frac{1}{8}$
828	$\frac{7}{16}$	$1\frac{1}{2}$	$\frac{1}{4}$

Bar magnets are manufactured to metric dimensions and the equivalent dimensions in inches are given for reference only.

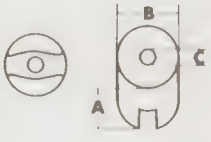


POCKET MAGNET

Cat. No.	Dimensions Inches			
	A	B	C	D
802	1	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{5}{16}$

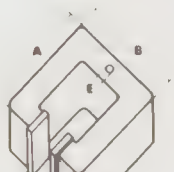
MINOR MAGNET

Cat. No.	Dimensions Inches			
	A	B	C	D
801	$\frac{7}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{5}{16}$



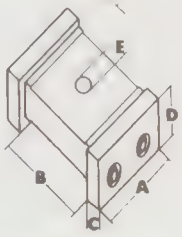
BUTTON MAGNET

Cat. No.	Dimensions Inches		
	A	B	C
821	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{11}{64}$
822	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{5}{16}$
823	$\frac{5}{8}$	1	$\frac{5}{16}$
824	1	$1\frac{1}{4}$	$\frac{1}{4}$



MAJOR MAGNET

Cat. No.	Dimensions Inches				
	A	B	C	D	E
862	$4\frac{3}{8}$	$4\frac{1}{16}$	$2\frac{1}{16}$	$1\frac{9}{16}$	$\frac{1}{4}$



CLAMPING MAGNET

Cat. No.	Dimensions Inches				
	A	B	C	D	E
937	$2\frac{1}{8}$	$2\frac{29}{32}$	$\frac{1}{2}$	$1\frac{1}{2}$	$\frac{13}{32}$

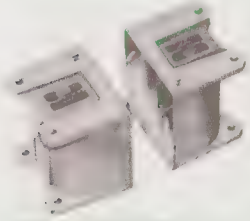
MAGNETIC QUICK LIFTER

The ECLIPSE Magnetic quick lifter provides the most rapid means of picking up, and releasing, ferrous loads up to 500 lbs., with flat surfaces and adequate thicknesses, in conjunction with either manual, or power assisted, lifting tackle.

Cat. No.	Diam.	Height		
		To hand Wheel	When Lifting	When Idle
975	$9\frac{1}{2}$"	$9\frac{9}{16}$"	$15\frac{3}{4}$"	12"

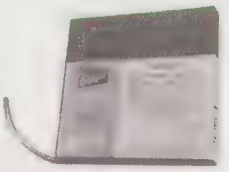
HAND MAGNET

Catalogue No.	Overall Height	Distance Between Poles
930	$8\frac{1}{4}$"	$1\frac{1}{4}$"



MAGNETIC FLOATERS

Cat. No.	Width at Poles	Height	Extreme Depth	Fixing Centres	Holes	
					Diam.	To Clear
913	$2\frac{7}{8}$"	3"	$2\frac{9}{16}$"	$1\frac{15}{16}$"	$\frac{9}{32}$"	$\frac{1}{4}$" Whit.
914	$3\frac{1}{8}$"	4"	3"	$2\frac{5}{8}$"	$\frac{9}{32}$"	$\frac{1}{4}$" Whit.
915	$4\frac{7}{16}$"	6"	$3\frac{1}{2}$"	$3\frac{1}{8}$"	$\frac{13}{32}$"	$\frac{3}{8}$" Whit.



MAGNETIC STRIP

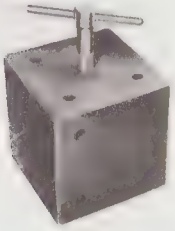
ECLIPSE Magnetic strip No. 880 looks like cab-tyre cable, is soft and is sufficiently flexible to bend into a 3" diameter circle. It can be cut with a knife, and can be drilled. Dividing the strip does not damage the magnetic performance. Short lengths can be butted together when mounting. Approx. size $\frac{3}{8}$" wide by $\frac{11}{64}$" thick.

MAGNETIC TOOLS

MAGNETIC HOLDFASTS

Holes tapped ¼" Whit U.N.C. or 8 S.I. except Cat. Nos. 938 and 942, which are drilled ²⁵⁄₆₄" diam.

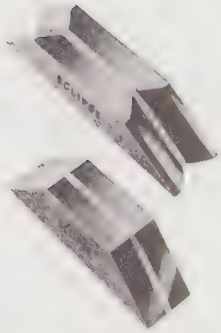
Cat. No.	Diam.	Height		Fixing Holes Centres
		Body	Overall	
939	1⅜"	1¾"	3"	1¼"
940	2⅛"	1 ¹³⁄₁₆"	3 ³⁄₁₆"	1½"
941	2¾"	2½"	3¾"	2"
942	4"	2 ¹³⁄₁₆"	4 ¹³⁄₁₆"	2 ²³⁄₃₂"
938	3¾" cube		5 ¹¹⁄₁₆"	2¼"



MAGNETIC MITRE CLAMPS

Available with plain or vee-ends. End contact faces machined to 45°; top and bottom faces also energised.
The vee-end clamp, 120° vee on each end face, will hold round material up to 2¼" diameter and also flat material.

Cat. No.	Length		Height	Width
	Base Face	Top Face		
923 (Plain)	6"	2½"	1¾"	1⅜"
924 (Vee)	7"	3¾"	1¾"	1⅜"



MAGNETIC VEE BLOCK

Supplied in a fitted wooden box. Matched pairs 934 M.P.

Cat. No.	Width	Length	Height
934	2¾"	4"	3¼"

MAGNETIC ADJUSTABLE LINK

Cat. No.	Dimensions of Each Block	Overall Length	Overall Width
920	2¼" x 1" x 1"	4⅛"	2⅛"

MAGNETIC HOLDER

A single "on/off" control mechanism is incorporated in the unit.

Cat. No.	Dimensions of Body	Overall Height
925	4¼" x 4¼"	5¼"

MAGNETIC POSITIONER

Will hold round or flat parts at any required angle. Each of the two magnetic blocks has two magnetic faces, energised simultaneously by the control handle.

Cat. No.	Dimensions of each Block	Overall Length	Overall Width
922	2⅛" x 2⅛" x 2"	8 ³⁄₁₆"	3"

MAGNETIC VICE

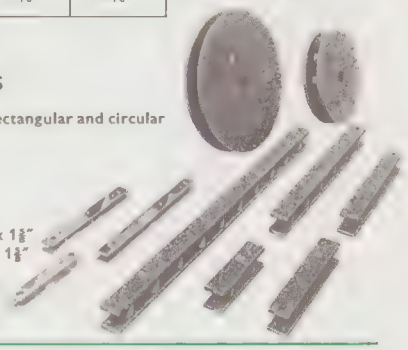
Cat. No.	Width	Length	Height
927	5⅜"	6 ¹¹⁄₁₆"	2 ¹¹⁄₁₆"

MAGNETIC RACKS

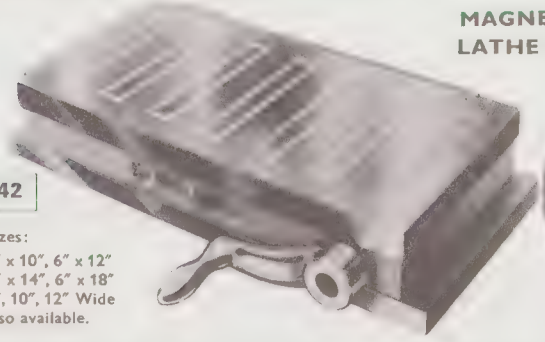
ECLIPSE Magnetic racks, in rectangular and circular form.

Light Duty
6", 9", 12" x 1" x ¾"

Heavy Duty
6", 9", 12", 18", 30" x 1⅜" x 1⅛"
8" and 12" diameter x 1" x 1⅛"



PERMANENT MAGNET CHUCKS



L1442

Sizes:
5" x 10", 6" x 12"
6" x 14", 6" x 18"
8", 10", 12" Wide
also available.

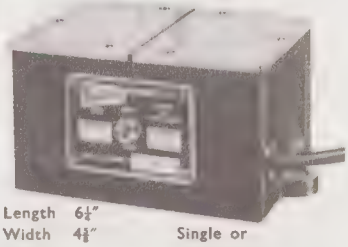
MAGNETIC LATHE CHUCKS

L1443

Sizes:
15", 12", 9", 6½"
4½" diameter.

L1444 DEMAGNETISERS

200-250 Volts A.C. 60 Watts



Length 6¼"
Width 4⅛"
Height 3⅛"

Single or Double Unit

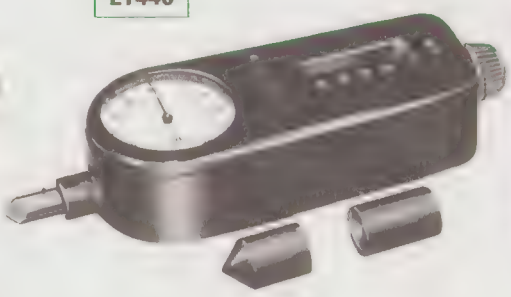
SPEED COUNTERS

L1445

HAND SPEED COUNTER "RECORD"

With one spindle only for both directions of rotation.
Speed: max. 6000 r.p.m.
Height of figures: $\frac{3}{16}$"
Reset: By one turn of the knurled knob.
Weight: 4.8 ozs.

L1446



HAND SPEED COUNTER "PROBATOR"

Combined with antimagnetic stopwatch with single spindle for adding in either direction of rotation.
Speed: max. 6000 r.p.m.
Height of figures: $\frac{3}{16}$" Weight: 7.6 oz.
Reset: By one turn of the knurled knob.

STARRETT No. 104

Dial Reading 0 to 100 r.p.m.
Steel Tip and two Rubber Tips included.

L1447

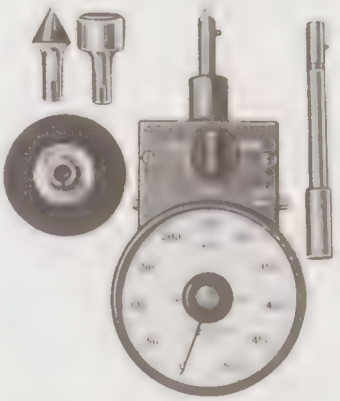
MEASURING COUNTERS

Revolution or Yardage Models
Recording Feet, Inches, Yards

L1448

HAND TALLY COUNTER

with retaining ring. Reset by knurled knob,
4 figures, $\frac{3}{16}$" high.
Weight 4 oz.
Diameter of the case: $1\frac{13}{16}$"
Height of the counter: $\frac{29}{32}$"



"SMITH'S" MODEL ATH 4

Torque on the lowest range (0-500) is .75 oz. inches.

Range
1. 0/500 r.p.m. direct reading
2. 0/5,000 r.p.m. scale value r.p.m. x 10
3. 0/50,000 r.p.m. scale value r.p.m. x 100

Other models available.

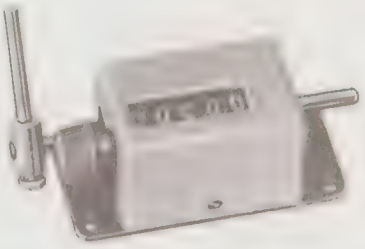
STROKE COUNTERS — MECHANICAL — ELECTRICAL — PREDETERMINED

L1449

Available 4 Figure, 5 Figure and 6 Figure.
Left Hand or Right Hand. Top Coming or Top Going

"VEEDER ROOT"

"TRUMETER"



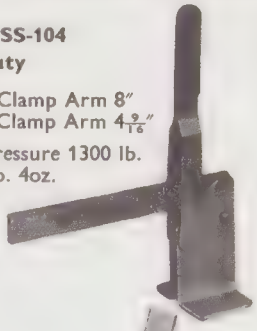
"IVO"

TOGGLE CLAMPS

VERTICAL-HANDLE HORIZONTAL SOLID-BAR TYPE

MODEL SS-104
Heavy Duty

Length of Clamp Arm 8″
Height of Clamp Arm 4 9/16″
Holding Pressure 1300 lb.
Weight 5lb. 4oz.

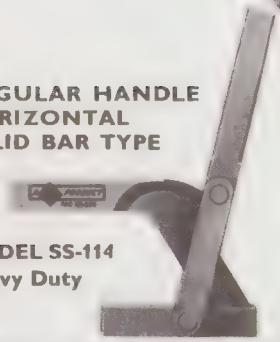


MODEL SS-107
Medium Duty

Model	No.	Clamp Arm		Holding Pressure	Weight ozs.
		Height	Length		
SS 107	25	1 7/16″	2½″	875 lb	16½
,,	35	2 3/16″	3½″	825 lb	20½
,,	50	3″	5″	775 lb	22
SU 107	25	1 7/16″	2½″	875 lb.	16
,,	35	2 3/16″	3½″	825 lb.	17½
,,	50	3″	5″	775 lb.	22
TS 107	25	1 7/16″	2½″	875 lb.	18½
,,	35	2 3/16″	3½″	825 lb.	22½
,,	50	3″	5″	775 lb.	26½
TU 107	25	1 7/16″	2½″	875 lb	18
,,	35	2 3/16″	3½″	825 lb.	19½
,,	50	3″	5″	775 lb.	24

ANGULAR HANDLE HORIZONTAL SOLID BAR TYPE

MODEL SS-114
Heavy Duty



No.	Clamp Arm		Holding Pressure	Weight
	Height	Length		
15	2 3/16″	1½″	700 lb.	13 oz.
25	3″	2½″	1500 lb.	36 oz.
35	4 3/16″	3½″	2100 lb.	6 lb.

VERTICAL HANDLE — HORIZONTAL "U" BAR TYPE

MODEL SU-107
Medium Duty

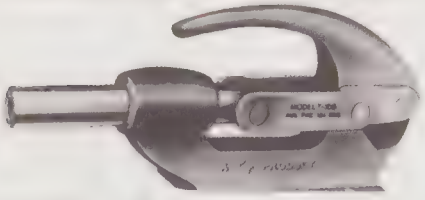
T-HANDLE HORIZONTAL SOLID BAR TYPE

MODEL TS-107
Medium Duty

T-HANDLE HORIZONTAL "U" BAR TYPE

MODEL TU-107
Medium Duty

HORIZONTAL TRAVEL PLUNGER TYPE

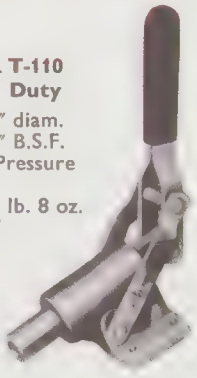


MODEL T-109 Extra Heavy Duty

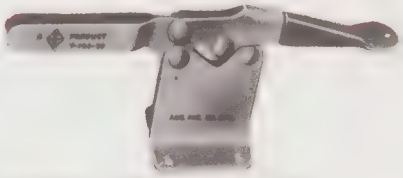
Spindle 1″ dia.
Tapped ½″ B.S.F.
Holding Pressure 4000 lb.
Weight 5 lb. 10 oz.
Length of Stroke 3″

MODEL T-110
Medium Duty

Spindle ¾″ diam.
Tapped ⅜″ B.S.F.
Holding Pressure
600 lb.
Weight 1 lb. 8 oz.
Length of
Stroke 2″



HORIZONTAL HANDLE AND BAR TYPE



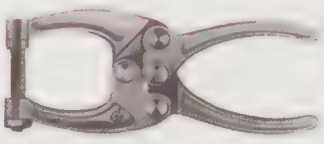
MODEL T-106 Light Duty

No.	Clamp Arm		Holding Pressure	Weight Ozs.
	Height	Length		
20	1⅜″	2½″	350 lb.	8
25	2⅛″	3″	325 lb.	9
30	2⅜″	3½″	300 lb.	10

PORTABLE TOGGLE-PLIER TYPE

MODEL P.T. 10 Medium Duty
MODEL P.T. 15 Heavy Duty

Designed for instant one-hand clamping and two-way release. Trigger may be pushed in either direction to release pressure immediately.



TOGGLE CLAMP ACCESSORIES

Fixed Pad Adjustable
Spindle ⅜″, ½″, ⅝″ B.S.F.
Swivel Foot Adjustable
Spindle ⅜″, ½″, ⅝″ B.S.F.
Spring Loaded
Adjustable Spindle ⅜″, ½″, ⅝″ B.S.F.

PRYOR MARKING DEVICES

- Priority Marking Punches
- Interchangeable Steel Type
- Hand Numberers
- Automatic Numbering Heads
- Marking Machines

ACTUAL SIZE AND SPACING OF STANDARD FIGURES

1/32" 0·8 m/m 234567
3/64" 1·2 m/m 234567
1/16" 1·6 m/m 234567
5/64" 2·0 m/m 234567
3/32" 2·4 m/m 234567
1/8" 3·2 m/m 234567
3/8" 9·5 m/m 234567
5/16" 8·0 m/m 234567
1/4" 6·35 m/m 234567
3/16" 4·75 m/m 234567
5/32" 4·0 m/m 234567

L1450 PRIORITY MARKING PUNCHES

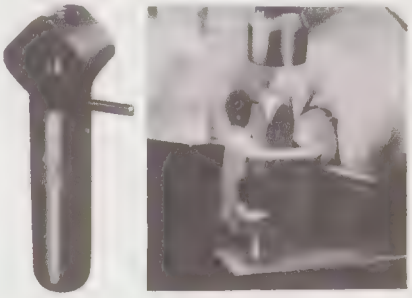
Sets of either figures or letters are supplied in plastic boxes with a separate compartment for each punch. Sizes larger than 1/4" in wooden boxes. Punches also supplied singly.
Reverse Diesinkers punches in sets also from stock.

DIMENSIONS

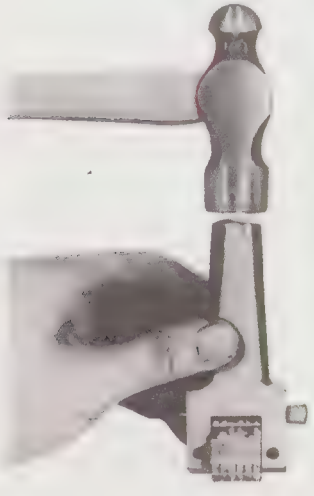
Character size	Punch size
1/32" 3/64" 1/16" 5/64" 3/32" 1/8" 5/32"	1/4" x 1/4" x 2 1/2" long
3/16" 1/4"	3/8" x 3/8" x 2 3/4" long
5/16" 3/8"	9/16" x 9/16" x 3 1/8" long
1/2"	3/4" x 3/4" x 3 3/8" long

L1451 PRIORITY PUNCH GRIP

The Punch Grip for making heavy blows with safety.



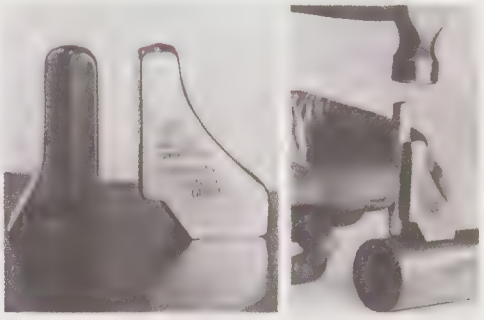
L1452 PRYOR HAND NUMBERERS



HAND NUMBERERS

The standard model has six wheels each with numbers 0-9 in 1/8" or 3/32" characters and a blank space. The marking wheels are easily rotated and positively locked by a securing pin; part numbers are changed in seconds. This hand numberer is very compact and enables the marking to be taken to the job. A hammer is the only tool required. Pryor hand numberers can be made specially with any number of wheels and with figures or letters to your own requirements.

L1453 PRIORITY PUNCH GUIDE



The Priority Punch Guide is for use with the smaller sizes of Priority Punches, up to 5/32". Its use ensures that the face of the punch is always normal to the face of the work so that a clear impression is obtained when the blow is struck. The V groove in the base permits such positioning even on round bars.

INTERCHANGEABLE STEEL TYPE

Pryor interchangeable steel type provides the complete answer to part numbering and general purpose marking in small batch work. Not only are the resultant impressions uniform for depth, spacing and alignment, but the speed with which it can be composed and applied render it a tremendous advance over separate hand punches, yet at a fraction of the cost of specially made "solid" stamps. Both flat and segmental forms are made. Flat type is rectangular in shape for use in hand holders, presses and roll marking machines, sizes $\frac{1}{32}$", $\frac{1}{16}$", $\frac{3}{32}$", $\frac{1}{8}$", $\frac{3}{16}$", $\frac{1}{4}$" and $\frac{3}{8}$" being available. Segmental type has tapered sides so that it can be assembled in the form of a roller for machine use only and is stocked in sizes $\frac{1}{16}$" and $\frac{3}{32}$".

'Universal' sets are widely popular. These are complete founts (as shown opposite) containing 100 pieces economically chosen to provide for most needs, yet avoiding duplication of little used characters. Spacing pieces are provided and a hand holder is included if required. Each set is supplied in a fitted hardwood case.

TYPE IN COMPLETE FOUNTS

Contents of fount sets with and without hand holders.

112HAA 100 pieces of $\frac{1}{32}$" type with 12 spacer pieces, tweezers and H.062 Holder.
112HA 100 pieces of $\frac{1}{16}$" type with 12 spacer pieces, tweezers and H.062 Holder.
112HB 100 pieces of $\frac{3}{32}$" type with 12 spacer pieces, tweezers and H.125 Holder.
112HC 100 pieces of $\frac{1}{8}$" type with 12 spacer pieces, tweezers and H.125 Holder.
106HE 100 pieces of $\frac{3}{16}$" type with 6 spacer pieces and H.187 Holder.
106HF 100 pieces of $\frac{1}{4}$" type with 6 spacer pieces and H.250 Holder.
106HH 100 pieces of $\frac{3}{8}$" type with 6 spacer pieces and H.375 Holder.
112AA 100 pieces of $\frac{1}{32}$" type with 12 spacer pieces and tweezers.
112A 100 pieces of $\frac{1}{16}$" type with 12 spacer pieces and tweezers.
112B 100 pieces of $\frac{3}{32}$" type with 12 spacer pieces and tweezers.
112C 100 pieces of $\frac{1}{8}$" type with 12 spacer pieces and tweezers.
112SA 100 segments size $\frac{1}{16}$", with 12 spacer pieces and tweezers.
112SB 100 segments size $\frac{3}{32}$", with 12 spacer pieces and tweezers.

TYPE HOLDERS

HAND HOLDERS

CATALOGUE REFERENCE	SIZE OF TYPE	NUMBER OF LINES	CAPACITY IN EACH LINE
H.062	$\frac{1}{32}$"	1 line	16
,,	$\frac{1}{16}$"	1 line	12
H.093	$\frac{1}{16}$"	2 lines	8*
,,	$\frac{3}{32}$"	1 line	8
,,	$\frac{1}{8}$"	1 line	6
H.125	$\frac{1}{16}$"	2 lines	16*
,,	$\frac{3}{32}$"	1 line	13
,,	$\frac{1}{8}$"	1 line	10
H.187	$\frac{3}{16}$"	1 line	6
H.250	$\frac{1}{4}$"	1 line	6
H.375	$\frac{3}{8}$"	1 line	6

TYPE HOLDERS FOR USE IN MACHINES

CATALOGUE REFERENCE	MACHINE	SIZE OF TYPE	NUMBER OF LINES	CAPACITY IN EACH LINE
E.P.1.FA	Pryor Model E.P.1	$\frac{1}{32}$"	1 line	16
,,	,, ,, ,,	$\frac{1}{16}$"	1 line	12
E.P.1.FB	,, ,, ,,	$\frac{1}{16}$"	2 lines	8*
,,	,, ,, ,,	$\frac{3}{32}$"	1 line	8
,,	,, ,, ,,	$\frac{1}{8}$"	1 line	6
E.P.1.FB2	,, ,, ,,	$\frac{1}{16}$"	2 lines	28*
,,	,, ,, ,,	$\frac{3}{32}$"	1 line	21
,,	,, ,, ,,	$\frac{1}{8}$"	1 line	16
E.P.1.FB3	,, ,, ,,	$\frac{1}{16}$"	2 lines	44*
,,	,, ,, ,,	$\frac{3}{32}$"	1 line	32
,,	,, ,, ,,	$\frac{1}{8}$"	1 line	24
E.P.34.F2F	,, ,, E.P.34 and E.P.34A		Slot $2\frac{3}{4}$" long x $\frac{3}{4}$" wide with fixing screws arranged for lines as follows:	
,,	,, ,, ,,	$\frac{3}{32}$"	1, 2 or 3 lines	29
,,	,, ,, ,,	$\frac{1}{8}$"	1, 2 or 3 lines	22
,,	,, ,, ,,	$\frac{3}{16}$"	1 or 2 lines	14
,,	,, ,, ,,	$\frac{1}{4}$"	1 or 2 lines	11
,,	,, ,, ,,	$\frac{3}{8}$"	1 line	7
R.S.A.	Press (Shank 1" dia. x $1\frac{1}{2}$" long)	$\frac{1}{32}$"	1 line	16
,,	,, ,,	$\frac{1}{16}$"	1 line	12
R.S.B.	,, ,,	$\frac{1}{16}$"	2 lines	28*
,,	,, ,,	$\frac{3}{32}$"	1 line	21
,,	,, ,,	$\frac{1}{8}$"	1 line	16

HOLDERS FOR SEGMENTAL TYPE

E.P.1.R. Pryor Model E.P.1 — Fifteen $\frac{1}{16}$", or ten $\frac{3}{32}$" segments

* Two lines of Size $\frac{1}{16}$" type can be accommodated in these holders by using a Model C.322 Pressure Pad.

AUTOMATIC NUMBERING HEADS

L1454 **For use in Power, Fly, Hand or Pneumatic Presses**

Shank 1″ diameter, 1½″ Long

Pryor automatic numbering heads provide a ready means of producing consecutive or random serial marking on metal articles where it is necessary for individual identity to be preserved. The number may either be put on to a nameplate or marked directly on the component itself.

This illustration is of a typical head having automatic action on all six wheels. Each movement of the ratchet lever turns the first wheel one position at a time which automatically brings the adjacent wheel(s) into position in turn. Thus one number is continually being added to the last producing a consecutive sequence. A facsimile or tell-tale figure engraved on each wheel shows the number which is next in turn to be marked.

LENGTH OF IMPRESSION Only Six Wheels can have Automatic Action

CHARACTER SIZE	Number of Wheels								
	2	3	4	5	6	7	8	9	10
1/32″	·0905	·162	·2335	·305	·3765	·448	·5195	·591	·6625
3/64″	·1235	·218	·3125	·407	·5015	·596	·6905	·785	·8795
1/16″	·1345	·232	·3295	·427	·5245	·622	·7195	·817	·9145
5/64″	·1625	·278	·3935	·509	·6245	·740	·8555	·971	1·0865
3/32″	·1895	·323	·4565	·590	·7235	·857	·9905	1·124	1·2575
1/8″	·2445	·415	·5855	·756	·9265	1·097	1·2675	1·438	1·6085
5/32″	·3045	·515	·7255	·936	1·1465	1·357	1·5675	1·778	1·9885
3/16″	·3645	·617	·8695	1·122	1·3745	1·627	1·8795	2·132	2·3845
1/4″	·4725	·778	1·0835	1·389	1·6945	2·000	2·3055	2·611	2·9165
5/16″	·579	·949	1·319	1·689	2·059	2·429	2·799	3·169	3·539
3/8″	·676	1·101	1·526	1·951	2·376	2·801	3·226	3·651	4·076

Black border indicates the three stock sizes. All six wheels have automatic action.

ACTUAL SIZE AND SPACING OF STANDARD FIGURES

1/32″ 0·8 m/m 234567
3/64″ 1·2 m/m 234567
1/16″ 1·6 m/m 234567
5/64″ 2·0 m/m 234567
3/32″ 2·4 m/m 234567
1/8″ 3·2 m/m 234567
3/8″ 9·5 m/m 234567
5/16″ 8·0 m/m 234567
1/4″ 6·35 m/m 234567
3/16″ 4·75 m/m 234567
5/32″ 4·0 m/m 234567

MARKING MACHINES

EP 1 An inexpensive bench model for small and light impressions.

EP 34 A floor mounted manually operated machine for general purpose work.

EP 34A Completely powered by compressed air for general purpose work.

EP 22 Entirely automatic for twist drills and similar pieces.

EP 37 For producing continuous or interrupted markings along the length of bars and tubes.

EP 40 An automatic hydraulic press with a maximum speed in excess of 4,000 pieces per hour.

EP 43 Standard hydraulic press, 5 tons capacity.

EP 41 Standard hydraulic press, 12 tons capacity.

EP 48 Standard hydraulic press, 20 tons capacity.

EP 33 Special hydraulic press, 150 tons capacity.

EP 67 Hydraulic roll marking machine, medium duty.

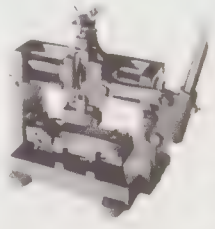
EP 57 Hydraulic roll marking machine, heavy duty.

EP 28 Multi-station rotary marking machine.

EP 70 Automatic electrolytic etching machine.

SPECIFICATION EP34A AIR OPERATED

Air supply	80 psi
Air consumption	¾ cu/ft min. at max. rate and full stroke
Speed	Upwards to 1,000 per hour depending upon stroke length and shape of work, etc.
Daylight	0–12¾″
Throat	7″
Carriage strokes	3/16″ to 4½″ adjustable
Table size	7¼″ x 8½″
Floorspace	40″ x 15½″
Height	54″
Nett weight	8 cwt.
Gross weight	10 cwt.
Case dimensions	24″ x 48″ x 60″



THE E.P.I. MARKING MACHINE

An efficient unit for the marking of cylindrical components. Special fixtures are supplied to support thin walled cylinders. Pryor steel type can be used in standard E.P.I. holders. Segmental type is used together with rotary holders for marking flat parts.

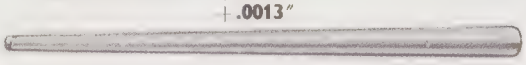
MODEL EP34— MANUAL OPERATION

L1456 HARDENED AND GROUND PRECISION DOWEL PINS

STANDARD SIZE Basic Diameter + .0001″
+ .0003″
OVERSIZE . . . . . Basic Diameter + .0011″
+ .0013″

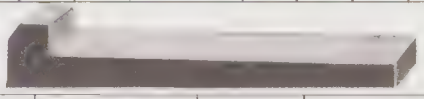
Diameter	Lengths	Diameter	Lengths	Diameter	Lengths
1/16″	1/4″ to 1/8″	7/32″	3/8″ to 2″	1/2″	1″ to 6″
3/32″	1/4″ to 1″	1/4″	3/8″ to 3″	5/8″	1″ to 6″
1/8″	1/4″ to 1 1/4″	5/16″	1/4″ to 4″	3/4″	1 1/2″ to 5″
5/32″	3/8″ to 1 1/4″	3/8″	1/4″ to 5″		
3/16″	3/8″ to 2″	7/16″	1″ to 2″		

L1457 TAPER PINS



No.	000	00	0	1	2	3	4	5	6	7	8	9	10
	1/8″	9/64″	5/32″	11/64″	3/16″	7/32″	1/4″	19/64″	11/32″	13/32″	1/2″	19/32″	25/32″
LENGTH AVAILABLE		3/4″		1/2″		—	—				—		
	1″	1″	1″	1″	1″	1″	1″						
	—		1 1/2″	1 1/2″	1 1/2″	1 1/2″							
	1 1/2″	1 1/2″	1 1/2″	1 1/2″	1 1/2″	1 1/2″	1 1/2″	1 1/2″				—	
			1 3/4″	1 3/4″	1 3/4″	1 3/4″	—	—				—	
	2″	2″	2″	2″	2″	2″	2″	2″					
								2 1/4″					
				2 1/2″	2 1/2″	2 1/2″	2 1/2″						
				3″	3″	3″	3″	3″	3″	3″	3″	3″	
							3 1/2″	3 1/2″	3 1/2″	3 1/2″	3 1/2″	3 1/2″	
						4″	4″	4″	4″	4″	4″	4″	4″
						5″	5″	5″	5″	5″	5″	5″	5″
						6″	6″	6″	6″	6″	6″	6″	6″
												8″	8″

L1458 GIB HEAD KEYS



Section	Length Available	Section	Length Available	Section	Length Available
1/4″ × 3/16″	3″ 4″	7/16″ × 3/8″	6″	3/4″ × 1/4″	6″
1/4″ × 1/4″	3″ 4″	1/2″ × 3/8″	4″ 5″ 6″	3/4″ × 3/8″	6″ 8″
5/16″ × 1/4″	3″ 4″	1/2″ × 7/16″	5″	3/4″ × 1/2″	6″
3/8″ × 1/4″	2 1/2″ 3″ 4″ 5″ 6″	1/2″ × 1/2″	4″ 6″	7/8″ × 3/8″	6″
3/8″ × 5/16″	3″ 4″ 5″ 6″	5/8″ × 3/8″	5″	7/8″ × 1/2″	6″ 8″
3/8″ × 3/8″	4″ 5″ 6″	5/8″ × 1/2″	4″ 5″ 6″	1″ × 1/2″	6″ 8″
7/16″ × 5/16″	4″	5/8″ × 3/8″	6″	1″ × 3/4″	8″

L1549 MAK-A-KEY

Square Steel Key Stock—Zinc Plated Cold Drawn Finish
Sizes: .000″ to + .002″ in both directions

1/8″ × 1/8″	3/16″ × 1/2″	5/16″ × 3/8″	3/8″ × 3/8″	1/2″ × 11/16″	11/16″ × 11/16″	7/8″ × 1″	1 1/2″ × 1 1/2″
1/8″ × 5/16″	3/16″ × 3/16″	5/16″ × 5/16″	3/8″ × 1/2″	1/2″ × 3/4″	11/16″ × 3/4″	7/8″ × 1 1/4″	1 1/2″ × 1 3/4″
1/8″ × 1/4″	1/4″ × 1/4″	5/16″ × 1/2″	7/16″ × 7/16″	5/8″ × 5/8″	3/4″ × 3/4″	1 1/16″ × 1 1/16″	2″ × 2″
3/16″ × 3/16″	1/4″ × 5/16″	5/16″ × 3/8″	7/16″ × 1/2″	5/8″ × 3/4″	3/4″ × 7/8″	1″ × 1″	
3/16″ × 1/4″	1/4″ × 3/8″	3/8″ × 3/8″	7/16″ × 5/8″	3/4″ × 3/4″	3/4″ × 1″	1″ × 1 1/4″	
3/16″ × 5/16″	1/4″ × 1/2″	3/8″ × 7/16″	1/2″ × 1/2″	3/4″ × 7/8″	1 1/16″ × 1 1/16″	1 1/4″ × 1 1/4″	
3/16″ × 3/8″	5/16″ × 5/16″	3/8″ × 1/2″	1/2″ × 3/8″	3/4″ × 1″	1 1/8″ × 1 1/8″	1 1/4″ × 1 1/2″	

L1460 MAK-A-KEY

Machine Key Kit Comprises 7 bars, packed in kit, size marked on bar

Sizes: 1/8″ × 1/4″, 5/16″ × 5/16″, 3/8″ × 1/4″, 1/4″ × 5/16″, 5/16″ × 3/8″, 3/8″ × 5/16″, 5/16″ × 1/2″.

STAINLESS STEEL KEY STEEL

Sizes: 3/16″, 1/4″, 5/16″, 3/8″, 7/16″, 1/2″.

L1461 MAK-A-PIN

Round Bar Stock Cold Drawn Finish packed in kit, size marked on bar
Length: 12″

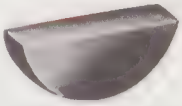
Sizes: 1/8″, 3/32″, 5/16″, 1/4″, 5/16″, 3/8″, 7/16″, 1/2″, 5/8″, 3/4″, 7/8″, 1″.

L1464 SPLIT C.I. COLLARS

Sizes: 1″, 1 1/4″, 1 1/2″, 1 3/4″, 2″, 2 1/4″, 2 1/2″, 2 3/4″, 3″, 3 1/4″, 4″.

Square Head Lock Screws

L1462 WOODRUFF KEYS

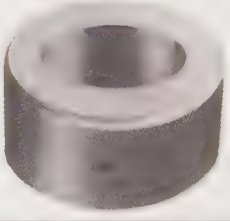


No.	Length	Width	Diam. of Cutter
1	1/4″	1/16″	1/4″
2	1/4″	3/32″	1/4″
3	1/4″	1/8″	1/4″
4	3/8″	3/32″	3/8″
5	3/8″	1/8″	3/8″
6	3/8″	3/32″	3/8″
7	1/2″	1/8″	1/2″
8	1/2″	3/32″	1/2″
9	1/2″	3/16″	1/2″
10	5/8″	3/32″	5/8″
11	5/8″	3/16″	5/8″
12	5/8″	5/32″	5/8″
A	5/8″	1/4″	5/8″
13	1″	3/16″	1″
14	1″	3/32″	1″
15	1″	1/4″	1″
B	1″	5/16″	1″
16	1 1/8″	3/16″	1 1/8″
18	1 1/8″	1/4″	1 1/8″
C	1 1/8″	5/16″	1 1/8″
19	1 1/4″	3/16″	1 1/4″
21	1 1/4″	1/4″	1 1/4″
D	1 1/4″	5/16″	1 1/4″
22	1 3/8″	1/4″	1 3/8″

Also Available in Tins of Assorted Sizes

L1463 SHAFT COLLARS

Mild Steel
Fitted with
Grub Screw



Shaft Diam.	Outside Diam.	Width	Grub Screw Size
3/8″	7/8″	7/16″	1/4″ BSW
1/2″	1″	1/2″	5/16″ ″
5/8″	1 1/8″	1/2″	3/8″ ″
3/4″	1 3/8″	11/16″	3/8″ ″
7/8″	1 1/2″	3/4″	3/8″ ″
1″	1 5/8″	3/4″	3/8″ ″
1 1/8″	1 7/8″	7/8″	3/8″ ″
1 1/4″	2″	7/8″	3/8″ ″
1 3/8″	2 1/8″	7/8″	3/8″ ″
1 1/2″	2 1/4″	1″	1/2″ ″
1 3/4″	2 1/2″	1 1/16″	1/2″ ″
2″	3″	1 1/16″	1/2″ ″
2 1/4″	3 1/2″	1 1/16″	1/2″ ″
2 1/2″	3 1/2″	1 1/2″	1/2″ ″
3″	4″	1 1/2″	1/2″ ″
3 1/2″	4 1/2″	1 1/2″	1/2″ ″
4″	5″	1 1/2″	1/2″ ″

INDUSTRIAL TRANSMISSION BEARING UNITS

L1465 PILLOW BLOCK UCP Series

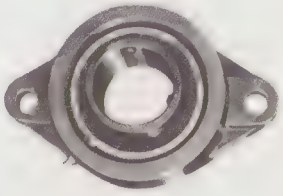
Bore Size	½″	¾″	1″	1¼″	1½″	1¾″	2″	2¼″	2½″	2¾″	3″
Bolt Centre	3 3/4″	3 3/4″	4 1/8″	5″	5 3/8″	5 3/4″	6 3/4″	7 1/4″	8″	8 1/4″	8 9/16″
Centre Height	1 3/16″	1 5/16″	1 7/16″	1 7/8″	1 15/16″	2 1/8″	2 1/2″	2 3/4″	3″	3 1/8″	3 1/4″

L1466 FLANGE UNIT UCF Series

Bore Size	½″	¾″	1″	1¼″	1½″	1¾″	2″	2¼″	2½″	2¾″	3″
Bolt Centre	2 33/64″	2 33/64″	2 3/4″	3 5/8″	4 1/64″	6 9/64″	5 1/8″	5 5/8″	5 55/64″	5 63/64″	6 17/64″
Overall Size	3 3/8″	3 3/8″	3 3/4″	4 5/8″	5 1/8″	5 3/8″	6 3/8″	6 7/8″	7 3/8″	7 5/8″	7 7/8″

L1467 TAKE UP UNIT UCT Series

Bore Size	½″	¾″	1″	1¼″	1½″	1¾″	2″	2¼″	2½″	2¾″	3″
Rail Dist.	3″	3″	3″	3½″	4 1/64″	4 1/64″	5 1/8″	5 1/8″	5 5/16″	5 5/16″	5 5/16″
Rail Width	15/32″	15/32″	15/32″	15/32″	5/8″	5/8″	7/8″	7/8″	1 1/32″	1 1/32″	1 1/32″
Overall Length	3 11/16″	3 11/16″	3 13/16″	5 1/16″	5 11/16″	5 11/16″	6 3/4″	7 5/8″	8 13/16″	8 13/16″	9 1/8″



L1468 FLANGE UNIT UCFL Series

Bore Size	½″	¾″	1″	1¼″	1½″	1¾″	2″	2¼″	2½″	2¾″	3″
Bolt Centre	3 25/64″	3 25/64″	3 29/32″	5 1/8″	5 43/64″	5 53/64″	7 1/4″	7 61/64″	8 17/64″	8 1/2″	8 55/64″
Overall Length	4 7/16″	4 7/16″	5 1/8″	6 5/16″	6 7/8″	7 3/8″	8 3/16″	9 13/16″	10 3/16″	10 7/16″	10 13/16″

L1469 FLANGE UNIT (Extension Type) UCFB Series

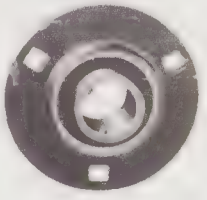
Bore Size	½″	¾″	1″	1¼″	1½″	1¾″
Dimension Details available on application						

L1470 PILLOW BLOCK UCPA Series

Bore Size	½″	¾″	1″	1¼″	1½″	1¾″
Bolt Centres	2 3/64″	2 3/64″	2 13/64″	3 5/32″	3 5/16″	3 35/64″
Centre Height	1 3/16″	1 3/16″	1 7/16″	1 7/8″	1 15/16″	2 9/64″

L1471 PILLOW BLOCK (Pressed Type) SAPP 2 Series

Bore Size	½″	5/8″	¾″	7/8″	1″	1 1/8″	1 1/4″
Bolt Centres	2 1/16″	2 1/16″	3″	3 3/8″	3 3/8″	3 3/4″	3 3/4″
Centre Height	7/8″	7/8″	1″	1 1/8″	1 1/8″	1 5/16″	1 5/16″

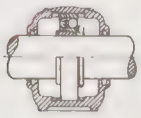


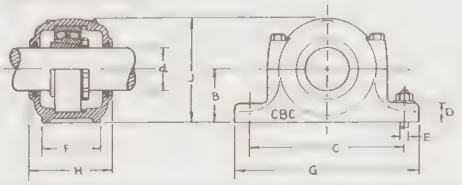
L1472 FLANGE UNIT (Pressed Type) PF2 Series

Bore Size	½″	¾″	1″	1¼″	1½″
P.C.D. Bolt Holes	2 1/2″	2 13/16″	3″	3 9/16″	4 1/16″
Number of Bolt Holes	3	3	3	3	4
Outside Diameter	3 3/16″	3 9/16″	3 3/4″	4 7/16″	5 13/16″
Bolt Size	1/4″	5/16″	5/16″	3/8″	1/2″

FURTHER DETAILS AVAILABLE

L1473 BALL AND ROLLER BEARING PLUMMER BLOCKS





Shaft Diam.	PLUMMER BLOCK						'B' Centre Height	'C' Bolt Centre	'E' Bolt Used
	Medium Duty			Heavy Duty					
	Housing Number	Ball Brg.	Roller Brg.	Housing Number	Ball Brg.	Roller Brg.			
¾″	SN505	1505E					1.575″	5½″	½″
				SN605	1605E		1.969″	5⅞″	½″
1″	SN506	1506E					1.969″	5⅞″	½″
				SN606	1606E		1.696″	5⅞″	½″
1¼″	SN508	1508E	22508E				2.362″	6½″	½″
				SN608	1608E	22608E	2.362″	6½″	½″
1½″	SN509	1509E	22509E				2.362″	6½″	½″
				SN609	1609E	22609E	2.756″	8¼″	⅝″
1¾″	SN510	1510E	22510E				2.362″	6½″	½″
				SN610	1610E	22610E	2.756″	8¼″	⅝″
2″	SN511	1511E	22511E				2.756″	8¼″	⅝″
				SN611	1611E	22611E	3.150″	9¼″	⅝″
2¼″	SN513	1513E	22513E				3.150″	9¼″	⅝″
				SN613	1613E	22613E	3.740″	10¼″	¾″
2½″	SN515	1515E	22515E				3.150″	9¼″	⅝″
				SN615	1615E	22615E	3.937″	11¼″	¾″
2¾″	SN516	1516E	22516E				3.740″	10¼″	¾″
				SN616	1616E	22616E	4.409″	11¼″	¾″
3″	SN517	1517E	22517E				3.740″	10¼″	¾″
				SN617	1617E	22617E	4.409″	12⅛″	⅞″
3½″	SN520	1520E	22520E				4.409″	12⅛″	⅞″
				S 620	1620E	22620E	5.511″	13¾″	1″
4″	SN522	1522E	22522E				4.921″	13¾″	⅞″
				S 622	1622E	22622E	5.511″	15⅜″	1″
4½″	S 524		22524E				5.512″	13¾″	⅞″
				S 624		22624E	6.300″	17½″	1¼″
4½″	S 526		22526E				5.906″	14⅝″	1″
				S 626		22626E	6.692″	18½″	1¼″
5″	S 528		22528E				5.906″	16½″	1¼″

L1474 PLUMMER BLOCKS

LIGHT AND HEAVY ORDINARY TYPES

Body—Cast Iron
Bushes—Split Plain Bronze

A — Size of Bore
B — Length of Base
C — Width of Base
D — Centres of Bolt Holes
E — Size of Bolts
F — Thickness of Sole at Bolt Holes
H — Height of Centre From Sole

LIGHT

A	B	C	D	E	F	H
¼″	5½″	1⅞″	4⅜″	5/16″	½″	1″
⅜″	5½″	1⅝″	4⅜″	5/16″	½″	1″
½″	5½″	1⅝″	4⅜″	5/16″	½″	1″
⅝″	5½″	1⅝″	4½″	5/16″	½″	1⅛″
1″	6¼″	1 1/16″	5⅛″	⅜″	½″	1¼″
1⅛″	6½″	1¼″	5⅝″	⅜″	½″	1⅜″
1¼″	7½″	1⅜″	5½″	7/16″	9/16″	1½″
1⅜″	7½″	1½″	–	7/16″	9/16″	1 9/16″
1½″	8½″	1¾″	6½″	½″	9/16″	1⅝″
1⅝″	9½″	2 1/16″	7⅜″	½″	⅝″	1⅞″
2″	10″	2⅜″	8½″	⅝″	11/16″	2″
2¼″	10½″	2 11/16″	8⅜″	⅝″	¾″	2⅜″
2½″	11½″	3″	9⅜″	⅝″	¾″	2 7/16″
2¾″	12⅜″	3 5/16″	10½″	⅝″	13/16″	2 11/16″
3″	13″	3⅝″	10⅜″	¾″	⅞″	2⅝″

HEAVY

A	B	C	D	E	F	H
1″	7½″	1 7/16″	5⅞″	⅜″	½″	1 5/16″
1¼″	7¾″	1 11/16″	5⅞″	7/16″	9/16″	1 9/16″
1⅜″	7⅞″	1¾″	6″	½″	11/16″	1⅝″
1½″	8⅜″	1 13/16″	6 7/16″	½″	⅝″	1¾″
1¾″	10″	2⅜″	8 3/16″	½″	11/16″	2″
2″	10¾″	2 11/16″	8¾″	⅝″	¾″	2⅛″
2¼″	11½″	3″	9 7/16″	⅝″	¾″	2⅜″
2½″	12⅜″	3 5/16″	10⅛″	⅝″	13/16″	2⅝″
2¾″	13⅛″	3⅝″	10 11/16″	⅝″	⅞″	2 11/16″
3″	13¾″	3 11/16″	11⅜″	¾″	13/16″	3⅛″
3¼″	14⅜″	4 1/16″	12¼″	¾″	1″	3⅜″
3½″	15⅜″	4 7/16″	13⅛″	¾″	1 1/16″	3½″
4″	18⅜″	4⅞″	14 11/16″	1″	1⅛″	3 13/16″
4½″	19⅜″	5⅜″	16⅜″	1⅛″	1 7/16″	4½″
5″	22″	6½″	17⅞″	1¼″	1½″	4¾″
5½″	23½″	6¼″	19¼″	1¼″	1⅝″	5″
6″	25″	7″	20⅜″	1¼″	1⅞″	5½″

L1475 STEEL BALLS—BEARING QUALITY

Diameter: 1/32″, 1/16″, 3/32″, 1/8″, 5/32″, 3/16″, 7/32″, 1/4″, 9/32″, 5/16″, 11/32″, 3/8″, 13/32″, 7/16″, 15/32″, 1/2″, 17/32″, 9/16″, 19/32″, 5/8″, 21/32″, 11/16″, 23/32″, 3/4″, 25/32″, 13/16″, 27/32″, 7/8″, 29/32″, 15/16″, 31/32″, 1″.

L1476 SELF-ALIGNING AND SELF-LUBRICATING PLUMMER BLOCKS

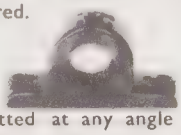
Shaft Size	Overall Length	Base Width	Overall Height	Centre Height	Bolt Centres	Bolt Size
½″	3″	½″	1⅜″	⅜″	2⅜″	¼″
⅝″	3″	½″	1⅜″	⅜″	2⅜″	¼″
¾″	4″	1″	2¼″	⅞″	3″	⅜″
⅞″	4″	1″	2⅛″	⅞″	3″	⅜″
1″	5″	1½″	2⅜″	1⅛″	3⅞″	⅜″
1⅛″	5″	1½″	2⅜″	1⅛″	3⅜″	⅜″
1¼″	6″	1¾″	3⅜″	1½″	4½″	½″
1⅜″	6″	1¾″	3⅜″	1½″	4½″	½″
1½″	6″	1¾″	3⅜″	1½″	4½″	½″

L1477 DEADEYES

Solid Cast Iron

These are an economical bearing supplied either with a plain bore, bronze or oilless bushings as required.

½″, ⅝″, ¾″, 1″, 1¼″, 1½″, 1¾″, 2″, 2¼″, 2½″, 3″.



Grease nipples fitted at any angle for slight extra charge.

DUFOR — GENERAL PURPOSE BRONZE BUSHINGS

PROGRESSIVE SIZE LIST—INDEXED BY INSIDE DIAMETER

Nominal Composition 85% Copper, 5% Tin, 5% Lead 5% Zinc.

SIZE TOLERANCE
Inside Diameter −.0005″ +.0015″ Outside Diameter +.002″ +.004″ Length +.010″ −.010″

Inside Diam.	Outside Diam.	Length	Part No.	Inside Diam.	Outside Diam.	Length	Part No.	Inside Diam.	Outside Diam.	Length	Part No.
5/16″	7/16″	1/2″	DB1201	3/8″	7/8″	2 1/4″	DB48	7/8″	1 1/8″	2 1/4″	DB87
5/16″	7/16″	1 1/2″	DB1398	3/8″	7/8″	2 1/2″	DB49	7/8″	1 1/8″	2 1/2″	DB88
3/8″	1/2″	3/4″	DB1405	3/8″	7/8″	3″	DB50	7/8″	1 1/8″	3″	DB185
3/8″	1/2″	1 1/8″	DB1176	3/8″	1″	1 1/4″	DB110	7/8″	1 1/4″	2″	DB89
3/8″	1/2″	2″	DB1238	3/8″	1″	2″	DB51	7/8″	1 1/4″	2 1/2″	DB1068
7/16″	9/16″	1 1/2″	DB100	3/8″	1″	2 1/2″	DB1087	7/8″	1 1/8″	3″	DB1168
7/16″	9/16″	2″	DB157	11/16″	13/16″	1 1/2″	DB54	15/16″	1 1/8″	1 1/4″	DB1018
7/16″	3/8″	1 1/4″	DB198	11/16″	13/16″	1 1/2″	DB55	15/16″	1 1/8″	3″	DB1139
7/16″	3/8″	1 1/2″	DB158	11/16″	13/16″	2″	DB56	1″	1 1/8″	1″	DB1007
7/16″	3/8″	2″	DB156	11/16″	7/8″	1 1/4″	DB160	1″	1 1/8″	1 1/4″	DB101
1/2″	9/16″	1 1/2″	DB1450	11/16″	7/8″	1 1/2″	DB1305	1″	1 1/8″	1 1/2″	DB91
1/2″	3/8″	3/4″	DB1	11/16″	7/8″	2″	DB57	1″	1 1/8″	1 3/4″	DB92
1/2″	3/8″	1″	DB2	11/16″	15/16″	2″	DB59	1″	1 1/8″	2″	DB93
1/2″	3/8″	1 1/4″	DB3	11/16″	15/16″	2 1/2″	DB61	1″	1 1/8″	2 1/2″	DB1204
1/2″	3/8″	1 1/2″	DB4	11/16″	1″	2″	DB1070	1″	1 1/8″	3″	DB1165
1/2″	3/8″	1 3/4″	DB5	3/4″	7/8″	7/8″	DB1502	1″	1 3/16″	2″	DB94
1/2″	3/8″	2″	DB6	3/4″	7/8″	1″	DB62	1″	1 3/16″	2 1/2″	DB168
1/2″	11/16″	1″	DB7	3/4″	7/8″	1 1/8″	DB115				
1/2″	11/16″	1 1/4″	DB8	3/4″	7/8″	1 1/2″	DB63	1″	1 1/4″	1″	DB1191
1/2″	11/16″	1 1/2″	DB9	3/4″	7/8″	1 1/2″	DB64	1″	1 1/4″	1 1/8″	DB98
1/2″	11/16″	2″	DB11	3/4″	7/8″	1 3/4″	DB65	1″	1 1/4″	1 1/4″	DB1101
1/2″	3/4″	1″	DB155	3/4″	7/8″	2″	DB66	1″	1 1/4″	1 1/2″	DB167
1/2″	3/4″	1 1/4″	DB1220	3/4″	7/8″	2 1/4″	DB200	1″	1 1/4″	1 3/4″	DB1809
1/2″	3/4″	1 1/2″	DB128	3/4″	7/8″	2 1/2″	DB135	1″	1 1/4″	2″	DB95
1/2″	3/4″	1 3/4″	DB12	3/4″	15/16″	1″	DB1281	1″	1 1/4″	2 1/2″	DB109
1/2″	3/4″	2″	DB13	3/4″	15/16″	1 1/2″	DB67	1″	1 1/4″	2 1/2″	DB166
1/2″	3/4″	2 1/2″	DB15	3/4″	15/16″	2″	DB69	1″	1 1/4″	3″	DB138
1/2″	7/8″	1 1/2″	DB1093	3/4″	15/16″	2 1/4″	DB70	1″	1 1/4″	3 1/2″	DB1153
1/2″	7/8″	2″	DB1094	3/4″	15/16″	2 1/2″	DB71	1″	1 1/4″	4″	DB1159
1/2″	1″	2″	DB1092	3/4″	1″	1″	DB1033	1″	1 3/8″	2″	DB1073
9/16″	11/16″	1″	DB18	3/4″	1″	1 1/2″	DB72	1″	1 3/8″	2 1/2″	DB1058
9/16″	11/16″	1 1/2″	DB18	3/4″	1″	1 1/2″	DB73	1″	1 3/8″	3″	DB1085
9/16″	11/16″	1 3/8″	DB139	3/4″	1″	1 3/4″	DB74	1 1/16″	1 1/4″	2 1/2″	DB1433
9/16″	11/16″	2″	DB20	3/4″	1″	2″	DB75	1 1/8″	1 1/2″	1 1/2″	DB1037
9/16″	3/4″	1 1/16″	DB1720	3/4″	1″	2 1/4″	DB76	1 1/8″	1 1/4″	2″	DB1197
9/16″	3/4″	1 1/4″	DB21	3/4″	1″	2 1/2″	DB77	1 1/8″	1 1/2″	3″	DB1140
9/16″	3/4″	1 1/2″	DB23	3/4″	1″	3″	DB78	1 1/8″	1 3/8″	2″	DB169
9/16″	3/4″	1 3/4″	DB24	3/4″	1 1/16″	2″	DB1166	1 1/8″	1 3/8″	2 1/2″	DB1014
9/16″	3/4″	2″	DB25	3/4″	1 1/16″	2 1/2″	DB1291	1 1/8″	1 3/8″	3″	DB170
9/16″	3/4″	2 1/4″	DB26	3/4″	1 1/8″	2″	DB1233	1 1/8″	1 3/8″	3 1/2″	DB1125
9/16″	13/16″	1 1/2″	DB29	3/4″	1 1/8″	2 1/2″	DB1053	1 1/8″	1 3/8″	4″	DB171
9/16″	13/16″	2″	DB30	3/4″	1 1/8″	3″	DB1052	1 1/8″	1 1/2″	3″	DB1069
9/16″	13/16″	2 1/2″	DB32	3/4″	1 1/4″	2 1/2″	DB1338	1 1/4″	1 3/8″	1 3/4″	DB1434
9/16″	7/8″	1 1/2″	DB1043	13/16″	15/16″	1 1/2″	DB1015	1 1/4″	1 3/8″	3″	DB1132
9/16″	7/8″	2″	DB1044	13/16″	15/16″	2″	DB147	1 1/4″	1 1/2″	1 1/2″	DB1074
9/16″	1″	2 1/2″	DB1060	13/16″	1″	1 1/2″	DB184	1 1/4″	1 1/2″	2″	DB172
5/8″	11/16″	2″	DB1057	13/16″	1″	2″	DB121	1 1/4″	1 1/2″	2 1/2″	DB1016
5/8″	3/4″	1/2″	DB1025	13/16″	1 1/16″	2″	DB1899	1 1/4″	1 1/2″	3″	DB173
5/8″	3/4″	1″	DB250	13/16″	1 1/16″	2 1/2″	DB1744	1 1/4″	1 1/2″	3 1/2″	DB1045
5/8″	3/4″	1 1/2″	DB317	13/16″	1 1/16″	2 1/2″	DB1303	1 1/4″	1 1/2″	4″	DB174
5/8″	3/4″	1 1/2″	DB34	13/16″	1 1/16″	2 3/4″	DB1745	1 1/4″	1 3/8″	1 3/4″	DB1254
5/8″	3/4″	1 3/4″	DB35	7/8″	1″	1″	DB1190	1 3/8″	1 3/8″	2″	DB1253
5/8″	3/4″	2″	DB36	7/8″	1″	1 1/8″	DB99	1 3/8″	1 3/8″	3″	DB1282
5/8″	3/4″	2 1/2″	DB37	7/8″	1″	1 1/4″	DB79	1 3/8″	1 3/4″	4″	DB1854
5/8″	3/4″	2 1/2″	DB33	7/8″	1″	1 1/2″	DB80	1 1/2″	1 3/8″	1 13/16″	DB1213
5/8″	13/16″	1″	DB1017	7/8″	1″	2″	DB97	1 1/2″	1 3/8″	2 1/2″	DB1046
5/8″	13/16″	1 1/2″	DB38	7/8″	1″	2 1/2″	DB199	1 1/2″	1 3/4″	3″	DB1047
5/8″	13/16″	1 1/2″	DB39	7/8″	1″	3″	DB164	1 1/2″	1 3/4″	3 1/2″	DB1048
5/8″	13/16″	2″	DB41	7/8″	1 1/16″	1″	DB165	1 1/2″	1 3/4″	4″	DB1049
5/8″	13/16″	3″	DB1177	7/8″	1 1/16″	1 1/2″	DB1230	1 1/2″	2″	3 1/2″	DB2160
5/8″	7/8″	1″	DB1250	7/8″	1 1/16″	2″	DB163	1 1/2″	2 1/8″	4″	DB1255
5/8″	7/8″	1 1/4″	DB44	7/8″	1 1/16″	2 1/2″	DB81	2″	2 1/4″	3 1/2″	DB1381
5/8″	7/8″	1 1/2″	DB45	7/8″	1 1/8″	1 1/2″	DB83	2″	2 1/2″	3 1/2″	DB2169
5/8″	7/8″	1 3/4″	DB46	7/8″	1 1/8″	1 1/2″	DB1034	2 1/4″	2 3/4″	3 1/2″	DB2170
5/8″	7/8″	1 1/8″	DB1192	7/8″	1 1/8″	1 1/2″	DB84	2 1/2″	3″	3 1/2″	DB2171
5/8″	7/8″	2″	DB47	7/8″	1 1/8″	2″	DB85				
							DB86				

SINTALITE POROUS BRONZE BEARINGS

Conforming to A.S.S. ED733

PLAIN SLEEVE BEARINGS

DIMENSIONS INCHES

I.D.	O.D.	Standard Length
.1890	.3145	3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8
.2525	.3775	3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 7/8, 1, 1 3/16, 1 1/4
.2520	.4475	5/16, 7/16, 9/16, 5/8, 3/4
.3130	.4400	1/4, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 1
.3135	.5030	3/8, 1/2, 5/8, 3/4, 1, 1 1/8, 1 1/4
.3770	.5025	3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, 1, 1 1/8
.3762	.5650	1/2, 5/8, 3/4, 1, 1 1/16
.3770	.6280	3/8, 1/2, 5/8, 3/4, 7/8, 1 1/16, 1, 1 1/8
.4390	.5650	3/8, 1/2, 5/8, 11/16, 3/4, 1 1/4
.4390	.6270	1/2, 3/4, 1, 1 1/8, 1 1/4
.5020	.6280	1/4, 3/8, 1/2, 9/16, 5/8, 3/4, 13/16, 7/8, 1, 1 1/4, 1 3/8
.5010	.6900	1/2, 5/8, 3/4, 7/8, 1, 1 1/4, 2
.5020	.7540	3/8, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 1, 1 1/4, 1 3/8, 1 1/2, 1 5/8
.5630	.6900	1/2, 5/8, 3/4, 7/8, 1, 1 1/4
.5630	.7540	1/2, 5/8, 3/4, 7/8, 1, 1 1/4
.6270	.7540	1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 1, 1 1/4, 1 1/8, 1 1/2
.6270	.8165	1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2
.6265	.8775	1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 1/2
.6900	.8165	3/8, 3/4, 7/8, 1, 1 1/8, 1 1/4
.6900	.9400	9/16, 3/8, 11/16, 3/4, 7/8, 1, 1 1/8, 1 1/4
.7520	.8775	1/4, 5/16, 1/2, 3/8, 3/4, 7/8, 1, 1 1/4, 1 1/2
.7520	1.0030	1/2, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2, 1 5/8, 1 3/4, 2
.7520	1.1270	3/8, 7/8, 1 1/4, 1 7/16, 1 1/2, 1 11/16
.8770	1.0030	1/2, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2
.8770	1.1280	3/4, 7/8, 29/64, 1, 1 1/8, 1 1/4, 1 3/8, 1 7/16, 1 1/2
.8770	1.1890	3/4, 1 1/4, 1 3/8, 1 9/16, 1 3/4
1.0015	1,1270	3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2
1.0015	1.2530	1/2, 3/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2, 1 5/8, 1 3/4, 1 7/8, 2
1.0030	1.3770	3/8, 3/4, 1, 1 1/4, 1 1/2
1.1270	1.3770	3/8, 3/4, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2, 1 5/8, 1 3/4, 1 7/8, 2, 2 1/8, 2 1/4, 2 1/2
1.2515	1.5030	1, 1 1/8, 1 1/4, 1 3/8, 1 1/2, 1 5/8, 1 3/4, 1 7/8, 2, 2 1/4
1.2515	1.6280	1 1/8, 1 1/16, 1 1/2, 1 3/4, 2
1.3770	1.6280	1, 1 1/4, 1 1/2, 1 3/4, 2
1.5020	1.7530	1, 1 1/4, 1 1/2, 1 5/8, 1 3/4, 2, 2 1/4
1.5020	1.8770	3/4, 1 1/8, 1 1/4, 1 1/2, 1 3/4, 1 7/8, 2, 2 1/4, 2 3/8
1.5035	2.0040	2

I.D.	O.D.	Standard Length
1.6270	1.8770	1, 1 1/4, 1 1/2, 1 3/4, 2
1.6270	2.0040	1 1/16, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/2
1.7540	2.0040	1 1/2, 1 3/4, 2, 2 1/4
1.7530	2.1290	1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/2
1.7530	2.2540	1 1/2, 1 3/4, 2, 2 1/4
1 8780	2.1290	1, 1 1/4, 1 1/2, 1 3/4, 2
2.0035	2.2530	1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2
2.0035	2.3775	1, 1 1/2, 2, 2 1/4, 2 1/2
2.0035	2.5040	1 1/2, 1 3/4, 2, 2 1/4, 2 1/2
2.2530	2.7540	1 3/4, 2, 2 1/4, 2 1/2
2.5035	3.0045	1 1/4, 2, 2 1/4, 2 1/2

TOLERANCES

The sizes shown on this list carry the following tolerances:—

Sleeve Bearings

Tolerance on Bore and O.D. are + .000″ − .001″ up to 1″ Bore.

Tolerance on Bore and O.D. are + .000″ .0015″ from 1″ to 2″ Bore.

Tolerance on Length are + .005″ up to 1″ long.
Tolerance on Length are + .010″ over 1″ long.

Flange Bearings

Flange Diameter + .005″.
„ Thickness + .003″.
„ Fillet 1/32″ up to 1/2″ O.D.
„ „ 2/64″ from 1/2″ O.D. to 1″ O.D.
„ „ 1/16″ from 1″ O.D. to 2″ O.D.
„ „ 3/32″ from 2″ O.D. to 2 1/2″ O.D.

Concentricity

Limits on concentrity are .0015″ (.003″ total Indicator Reading) up to 1″ Bore.

Limits on concentricity are .002″ (.004″ total Indicator Reading) over 1″ Bore.

FLANGE BEARINGS

DIMENSIONS INCHES

Inside Diam.	Outside Diam.	Flange	Length
.1580	.2530	3/8 × 1/8	1/4
.1860	.3500	7/16 × 1/8	1/32
.1895	.2530	7/16 × 1/32	5/32, 1/4
.2510	.3770	7/16 × 1/16	2/64
.2520	.5035	3/8 × 1/8	3/4
.2530	.3780	1/2 × 1/16	1/4 19/64, 3/8, 1/2, 7/16, 11/16
.3140	.4400	9/16 × .057	1/4, 1/2, 11/16, 3/4
.3140	.4380	9/16 × 1/16	3/8, 23/64, 1/2, 5/8, 31/32
.3135	.6280	3/4 × 1/16	7/32
.3760	.6250	7/8 × 3/32	1 1/32
.3772	.6900	11/16 × 1/16	7/16
.3764	.5035	5/8 × 3/32	1/2, 7/8, 1 1/8
.3775	.5020	5/8 × 1/16	1/4, 3/16, 3/8, 1/2, 1
.3775	.6270	3/4 × 1/8	5/8, 3/4
.3780	.4405	3/4 × 1/16	17/64
.4380	.5650	11/16 × 1/16 11/16 × 3/32 11/16 × 1/8	3/8 3/4 7/8

Inside Diam.	Outside Diam.	Flange	Length
4390	.5650	11/16 × 3/32	31/32
.4700	.6270	13/16 × 1/16	1/8
.4700	.6470	13/16 × 1/16	3/8
1 1/8 × 1/8	1 1/8		
.4900	.8760	1 1/8 × 1/8	1 3/8
.4982	.7550	1 × 1/8	3/4
.5000	.6870	13/16 × 1/16	9/16, 13/16
.5000	.7530	1 1/8 × 3/16	1 1/2
.5020	.6270	29/32 × 3/32	7/16, 3/8, 1/2, 11/16, 1
.5020	.6280	7/8 × 1/8	1/2
.5020	.7530	1 × 1/8	1 3/8
.5020	.7550	1 × 1/8	7/16, 1/2, 5/8, 3/4
.5020	.8150	1 1/8 × 1/8	1 1/4
.5020	.8770	1 × 1/8	3/4
.5540	.9390	1 1/4 × 3/16	1 1/8
.5630	.7550	1 × 1/8	1 13/64
.6150	.8170	1 1/8 × 1/8	1 1/2
.6150	.9870	1.195 × 3/32	13/16, 1 1/8

Inside Diam.	Outside Diam.	Flange	Length
.6150	1.0180	1.195 × 3/32	1
.6200	1.0660	1 1/4 × 1/4	1 1/2
1.0026	1.2530	1 3/4 × 1/8	3/4, 1, 1 1/2
1.0640	1.2530	1 3/8 × 1/8	1
1.1270	1.3765	1 3/8 × 3/16	1/2, 13/16
1.1280	1.2530	1 3/8 × 1/16	3/8
1.1865	1.3785	1 3/4 × 1/8	3/4
1.2500	1.5030	2 × 3/32	1 1/2
1.2515	1.5030	2 × 1/8	1, 1 1/4, 1 5/16, 1 1/2, 1 3/4, 1 3/4
1.2545	1.3780	1 3/8 × 1/16	1/2
1.3140	1.5650	2 1/4 × 1/4	1 1/2
1.3760	1.6030	1 23/32 × .100	1
1.5015	1.8767	2 × 3/32	2 1/32, 1 1/16
1.5060	1.7530	2 1/4 × 1/8	1, 1 1/16
1.6260	2.0030	2 1/4 × 1/8	1 3/32
1.7540	2.0040	2 1/2 × 1/8	1 3/32, 1 13/32
1 7510	2.1280	2 1/8 × 1/8	1 1/8
1.8150	2.0040	2 1/2 × 3/32	1 7/16

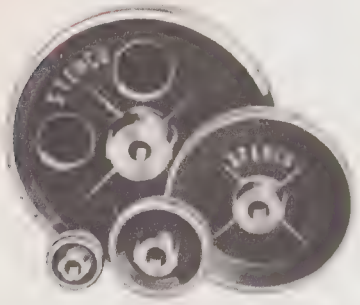
Inside Diam.	Outside Diam.	Flange	Length
.6270	.8775	1 × 1/8	3/8, 5/8, 3/4, 13/16, 1, 1 1/8, 1 3/8
.6290	.8140	1 1/16 × .119	1/2, 5/8, 13/32
.6300	.7530	1 1/8 × 3/32	1
.6900	.8160	1 3/16 × 1/8	3/8, 1 1/4
.7255	1.0630	1 43/64 × .100	1 17/64
.7460	1.0010	1 1/4 × 1/8	1 1/8
.7485	.9710	1 1/4 × 1/8	1 1/4
.7500	.9505	1 1/4 × 1/8	13/32
.7520	1.0180	1 1/2 × 1/8	15/16
.7520	1.0030	1 1/8 × 1/8	3/8, 3/4, 1
.7520	1.0030	1 1/4 × 1/8	1/2, 13/16, 1 1/8, 1 1/4, 1 1/8, 1 13/32
.8760	1.1930	1 3/8 × 3/32	1 3/8, 1 1/4
.8760	1..530	1 3/8 × 3/32	1 1/4
.9390	1.1890	1 15/16 × 1/8	1
1.0015	1.3155	1 1/4 × 1/8	3/4, 1 1/8, 1 1/4, 1 1/2

PULLEYS

L1478 SINGLE "A" SECTION V BELT PULLEYS

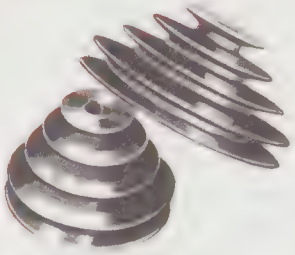
Diameter	Bores				
	30° Inclusive Angle				
1¼″	½″	⅝″			
1½″	½″	⅝″			
1¾″	½″	⅝″	¾″		
2″	½″	⅝″	¾″		1″
2¼″	½″	⅝″	¾″	1″	1¼″
2½″	½″	⅝″	¾″	1″	1¼″
	34° Inclusive Angle				
3″	½″	⅝″	¾″	1″	1¼″
3½″	½″	⅝″	¾″	1″	1¼″
4″	½″	⅝″	¾″	1″	1¼″
4½″	½″	⅝″	¾″	1″	1¼″
5″	½″	⅝″	¾″	1″	1½″
6″	½″	⅝″	¾″	1″	1½″
	38° Inclusive Angle				
7″	½″	⅝″	¾″	1″	1½″
8″	½″	⅝″	¾″	1″	1½″
9″	½″	⅝″	¾″	1″	1½″
10″	½″	⅝″	¾″	1″	1½″
12″	½″	⅝″	¾″	1″	1½″
14″		⅝″	¾″	1″	1½″
16″		⅝″	¾″	1″	1½″
18″		⅝″	¾″	1″	1½″

L1479 DOUBLE "A" SECTION V BELT PULLEYS



Diameter	Bores			
	30° Inclusive Angle			
2″	½″	⅝″	¾″	1″
2½″	½″	⅝″	¾″	1″
	34° Inclusive Angle			
3″	½″	⅝″	¾″	1″
3½″	½″	⅝″	¾″	1″
4″	½″	⅝″	¾″	1¼″
5″	½″	⅝″	¾″	1½″
6″	½″	⅝″	¾″	1½″
	38° Inclusive Angle			
8″	½″	⅝″	¾″	1½″
10″	½″	⅝″	¾″	1½″

L1480 "A" SECTION STEPPED PULLEYS



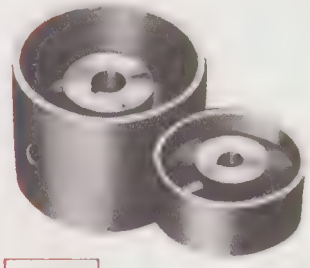
Four Step

Pulley Size	Bore
3¼″ 2¾″ 2¼″ 1¾″	½″ ⅝″ ¾″
4″ 3¼″ 2½″ 1¾″	½″ ⅝″ ¾″
5″ 3⅞″ 2 13/16″ 1¾″	½″ ⅝″ ¾″
5½″ 4⅜″ 3 5/16″ 2¼″	½″ ⅝″ ¾″ 1″
7″ 6″ 5″ 4″	½″ ⅝″ ¾″ 1″ 1¼″

Five Step

6″ 5¼″ 4½″ 3¾″ 3″	½″ ⅝″ ¾″ 1″ 1¼″

L1481 CROWN FACE PULLEYS



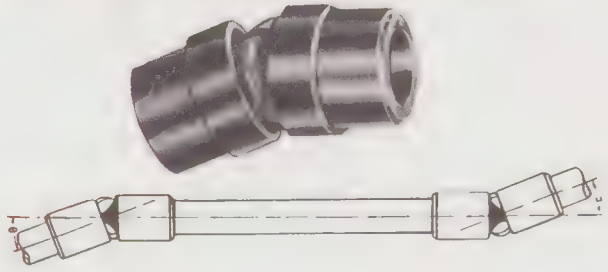
Diameter	Width	Bore
2″	1½″	½″ ⅝″ ¾″
2½″	2″	½″ ⅝″ ¾″ 1″
2¾″	1½″	½″ ⅝″ ¾″ 1″
3″	1¼″	½″ ⅝″ ¾″ 1″
3″	2″	½″ ⅝″ ¾″ 1″
3″	3″	½″ ⅝″ ¾″ 1″
3½″	3″	½″ ⅝″ ¾″ 1″
4″	3″	½″ ⅝″ ¾″ 1″
4″	4″	½″ ⅝″ ¾″ 1″
4½″	3½″	½″ ⅝″ ¾″ 1″
4½″	4½″	½″ ⅝″ ¾″ 1″
5½″	5″	½″ ⅝″ ¾″ 1″

L1482 CAST IRON PULLEYS

SECTION	A	B	C	D
No. of Grooves	1 to 7	1 to 10	1 to 10	1 to 10
Outside Diam.	3″ to 24″	5½″ to 36″	9″ to 50″	12″ to 48″

Supplied with Bore Size, Standard or Special Keyway, or Set Screw to suit your needs.

L1483 MOLLART UNIVERSAL BALL JOINTS



Driving and driven shafts should be at the same angle with the Intermediate shaft and the fork members on each end of the latter should be in the same plane.

SIZES AND TORQUE VALUES OF MOLLART UNIVERSAL BALL JOINTS

Size No.	A Overall Length	B Outside Diameter	C Depth of Bore	D Diameter of Bore	Weight lbs. ozs.	Approx. Static Torque lb.-ft.	Torque at Eastic Limit lb.-ft.	Allowable Eccentricity
01	1 2/3″	21/32″	⅜″ or 7/16″	¼″ or ⅜″	1	60	27	.003″
1	2 1/8″	27/32″	½″	½″	3½	132	59	.003″
2	2½″	1 3/32″	⅝″	⅝″	7	320	146	.003″
3	3″	1 5/16″	¾″	¾″	12½	572	255	.003″
4	3½″	1 19/32″	1 3/16″	⅞″ or 1″	1 4	1080	486	.003″
5	4 13/16″	1 27/32″	1¼″	1⅛″	1 15	1341	600	.003″

FLAT TRANSMISSION BELTING

L1485 **LEATHER**
Single or Double Ply in Medium, Heavy or Extra Heavy Duty Width and Length to suit your needs.
Round $\frac{1}{8}$", $\frac{3}{16}$", $\frac{1}{4}$", $\frac{5}{16}$", $\frac{3}{8}$", $\frac{1}{2}$" Diameter.

L1486 **RUBBER**
Standard Series: 32 ozs. per Lineal Yard 42" Wide.
Heavy Duty Series: 36 ozs. per Lineal Yard 42" Wide.
Width and Length to suit your needs.

L1487 **BELT LACES**
Widths $\frac{1}{4}$", $\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$", 1"
Lengths 3' to 8'.

L1488 **ROUND LEATHER BELTING**
$\frac{3}{16}$", $\frac{1}{4}$", $\frac{5}{16}$", $\frac{3}{8}$" diameter.
100' Reels — Cut to Length required.

L1489 **STEEL BELT FASTENERS**

SERIES "A" PARALLEL POINTS

0	1	2	3	4	5
$\frac{1}{8}$"-$\frac{3}{16}$"	$\frac{3}{16}$"-$\frac{1}{4}$"	$\frac{1}{4}$"-$\frac{5}{16}$"	$\frac{5}{16}$"-$\frac{3}{8}$"	$\frac{3}{8}$"-$\frac{7}{16}$"	$\frac{7}{16}$"-$\frac{9}{16}$"

SERIES "C" STAGGERED POINTS

115	117	119
$\frac{7}{16}$"-$\frac{9}{16}$"	$\frac{1}{2}$"-$\frac{5}{8}$"	$\frac{5}{8}$"-$\frac{13}{16}$"

ADJUSTABLE LINK 'V' BELTING

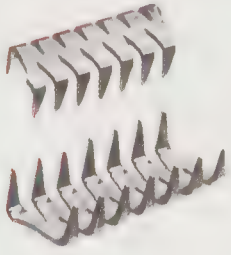
L1484

STANDARD SERIES:
For Sheaves 38°-40° angle.

Section	Width
A	$\frac{1}{2}$"
B	$\frac{21}{32}$"
C	$\frac{7}{8}$"
D	$1\frac{1}{4}$"

"Z" SERIES
For Sheaves 28° Angle.
Sizes: $\frac{3}{8}$" $\frac{1}{2}$" $\frac{11}{16}$" $\frac{3}{4}$" $\frac{7}{16}$" $\frac{5}{8}$" $\frac{7}{8}$"

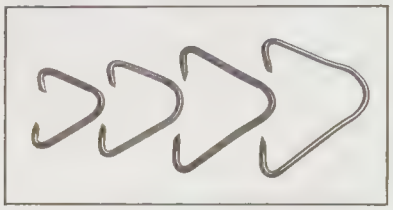
L1490 **AUSTEELACE — FLEXIBLE STEEL**
For Leather, Rubber, Cotton or Canvas Stitched Belts



Size	Belt Thickness
15	$\frac{1}{8}$" - $\frac{5}{32}$"
20	$\frac{5}{32}$" - $\frac{3}{16}$"
25	$\frac{3}{16}$" - $\frac{1}{4}$"
27	$\frac{1}{4}$" - $\frac{9}{16}$"
35	$\frac{9}{32}$" - $\frac{5}{16}$"
45	$\frac{11}{32}$" - $\frac{3}{8}$"
65	up to $\frac{1}{2}$"

Packed in Boxes Containing 12 Lengths each of 12".

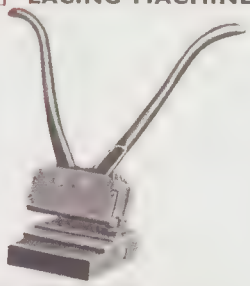
L1491 **GEM CARDED BELT HOOKS**
For all types of Belting



Packed in Boxes Containing 12 Cards each of 12".

Size	Belt Thickness	Belt Width
3	$\frac{5}{32}$" - $\frac{3}{16}$"	4" - 5"
4	$\frac{3}{16}$" - $\frac{1}{4}$"	5" - 6"
5	$\frac{1}{4}$" - $\frac{5}{16}$"	6" - $8\frac{1}{2}$"
6	$\frac{5}{16}$" - $\frac{3}{8}$"	$8\frac{1}{2}$" - 10"

L1492 **HAND LEVER BELT LACING MACHINE**



L1494 **ORION'S BELT DRESSING**
Liquid 1 lb., $\frac{1}{2}$ Gal. and 1 Gal Tins.

L1495 **DIXON'S BELT DRESSING**
Stick 1 lb.

L1496 **CHESTERTON BELT-F10 LIQUID**
$\frac{1}{4}$ Gal. Tins.

L1493 **HAMMER TYPE BELT LACING MACHINE**

L1497 **CHESTERTON SPRA-FLEX**
Surface Lubricant
14 oz. Pressurised Can

L1498 **CHESTERTON CHAIN DRIVE**
Internal Lubricant
14 oz. Pressurised Can

L1499 STANDARD INDUSTRIAL V-BELT SIZES

Inside Length = Symbol Number in Inches

A Section ½" x 11/32"			B Section 21/32" x 7/16"			C Section 7/8" x 17/32"		D Section 1¼" x ¾"		E Section 1½" x 29/32"
A23	A55	A93	B26	B65	B107	C40	C120	D75	D238	E210
A25	A56	A96	B29.5	B66.5	B110	C42	C124	D95	D268	E238
A26	A57	A97.5	B31	B68	B112	C43	C128	D120	D298	E268
A27	A58	A99	B32	B69	B114	C44	C136	D128	D314	E298
A28	A59	A100	B33	B70	B117	C45	C144	D144	D328	E328
A29	A60	A102	B34	B71	B120	C46	C152	D158	D358	E358
A30	A61	A105	B35	B72	B124	C49	C158	D162	D418	E418
A31	A62	A107	B36	B73	B128	C51	C162	D168	D538	E478
A32	A63	A112	B37	B74	B136	C55	C173	D173	D598	E538
A33	A64	A120	B38	B75	B139	C59	C180	D180		E598
A34	A65	A124	B40	B76	B144	C60	C195	D195		
A35	A66	A128	B41	B77	B152	C63	C204	D204		
A36	A68	A136	B42	B78	B158	C65	C210	D210		
A37	A69	A144	B43	B79	B162	C68	C223	D226		
A38	A70	A154	B44	B80	B173	C71	C238			
A39	A71	A173	B46	B81	B180	C73	C268			
A40	A72		B48.5	B82	B195	C75	C298			
A41	A73		B50	B83	B204	C78	C358			
A42	A74		B51	B85	B210	C81	C418			
A43	A75		B52	B87	B224	C85				
A44	A76		B53	B88	B238	C90				
A45	A78		B54	B90	B268	C93				
A46	A79		B55	B91		C96				
A47	A80		B56	B93		C97				
A48	A81		B57	B95		C99				
A49	A82		B58	B96		C100				
A50	A84		B59	B97		C101				
A51	A85		B60	B99		C105				
A52	A87		B62	B100		C108				
A53	A88		B63	B103		C112				
A54	A90		B64	B105		C114				

All Industrial V-Belts are 40° Included between Sides. The number of a V-Belt indicates its Inside Length and Type or Section E.G. A87 A Section Belt 87 Inches Inside Length.

For Pitch Length add		for Outside Length add	
A	1.6"	A	2.16"
B	1.8"	B	2.75"
C	2.2"	C	3.34"
D	3.2"	D	4.71"
E	3.7"	E	5.69"

L1500 FENNER F/HP V-BELTS (FRACTIONAL HORSE POWER)

(FZ) 2000 SERIES Section ⅜" x 13/32"					
Symbol Number	Inside Length Inches	Symbol Number	Inside Length Inches	Symbol Number	Inside Length Inches
2150	13.6	2285	27.1	2400	38.6
2160	14.6	2290	27.6	2410	39.6
2170	15.6	2300	28.6	2420	40.6
2180	16.6	2310	29.6	2430	41.6
2190	17.6	2320	30.6	2440	42.6
2200	18.6	2325	31.1	2450	43.6
2210	19.6	2330	31.6	2460	44.6
2215	20.1	2334	32.0	2475	45.1
2220	20.6	2340	32.6	2480	46.6
2225	21.1	2350	33.6	2500	48.6
2230	21.6	2360	34.6	2549	53.5
2240	22.6	2370	35.6	2614	60.0
2245	23.1	2375	36.1	2664	65.0
2250	23.6	2380	36.6	2674	66.0
2260	24.6	2385	37.1	2694	68.0
2270	25.6	2390	37.6	2724	71.0
2280	26.6	2395	38.1	2834	82.0

(FA) 3000 SERIES Section ½" x 13/32"					
Symbol Number	Inside Length Inches	Symbol Number	Inside Length Inches	Symbol Number	Inside Length Inches
3190	17.2	3310	29.2	3430	41.2
3200	18.2	3315	29.7	3440	42.2
3210	19.2	3320	30.2	3450	43.2
3220	20.2	3330	31.2	3460	44.2
3230	21.2	3340	32.2	3470	45.2
3240	22.2	3345	32.7	3480	46.2
3245	22.7	3350	33.2	3490	47.2
3250	23.2	3360	34.2	3500	48.2
3260	24.2	3370	35.2	3520	50.2
3270	25.2	3380	36.2	3540	52.2
3280	26.2	3390	37.2	3560	54.2
3290	27.2	3400	38.2	3580	56.2
3300	28.2	3410	39.2	3600	58.2
3305	28.7	3420	40.2		

All V-Belts listed here have 40° included angle between sides. Fractional Horse Power V-Belts can be supplied in special qualities in the same way as Standard Industrial V-Belts.

The number of a F/HP V-Belt indicates Series and Outside length e.g. 2245 Series 2000 Length 24.5 Inches.

Recommended F/HP Belt Section to use according to Power and Speed

This table gives a general guide only as to power capabilities of F/HP V-Belts.

H.P. of Electric Motor	DRIVING SPEED IN R.P.M.		
	2850	1425	960
1/20	Series 2000 (FZ)	Series 2000 (FZ)	Series 2000 (FZ)
1/12	2000 (FZ)	2000 (FZ)	2000 (FZ) or 3000 (FA)
1/8	2000 (FZ) or 3000 (FA)	2000 (FZ) or 3000 (FA)	3000 (FA) or 2000 (FZ)
1/6	2000 (FZ) or 3000 (FA)	2000 (FZ) or 3000 (FA)	3000 (FA)
1/4 1/3 1/2 3/4	3000 (FA)	3000 (FA)	3000 (FA)

L1501 FENNER TAPER-LOCK® BUSHES

In V-Belt, Wedge-Belt and Timing-Belt Pulleys, Chain Sprockets, Flexible and Rigid Couplings, Weld-on-Hubs, and Adaptors.

Bush. No.	Bore Sizes Available	Keyway Width x Depth at Side	O.D. at Large End of Taper
1008	5/16 3/8 7/16 1/2 11/16 5/8 3/4 12/16 7/8 1	1/8 x 1/16 5/32 x 5/64 1/4 x 1/8 1/4 x 1/16	1 23/64
1108	5/16 3/8 7/16 1/2 11/16 5/8 3/4 12/16 7/8 1 1 1/16 1 1/8	1/8 x 1/16 5/32 x 5/64 1/4 x 1/8 5/32 x 5/64*	1 23/64
1210 and 1215	5/16 3/8 7/16 1/2 11/16 5/8 3/4 12/16 7/8 1 1 1/16 1 1/8 1 1/4	1/8 x 1/16 5/32 x 5/64 1/4 x 1/8 5/32 x 1/16	1 7/8
1310 and 1315	5/16 3/8 7/16 1/2 11/16 5/8 3/4 12/16 7/8 1 1 1/16 1 1/8 1 1/4 1 3/16 1 3/8	1/8 x 1/16 5/32 x 5/64 1/4 x 1/8 5/32 x 1/16 3/8 x 1/8	2
1610 and 1615	5/16 3/8 7/16 1/2 11/16 5/8 3/4 12/16 7/8 1 1 1/16 1 1/8 1 3/16 1 1/4 1 1/2 1 3/8	1/8 x 1/16 5/32 x 5/64 1/4 x 1/8 5/32 x 1/16 3/8 x 1/8 7/32 x 1/8*	2 1/4
1811	12/16 3/4 1 1 1/16 1 1/8 1 3/16 1 1/4 1 1/2 1 3/8	5/32 x 5/64 1/4 x 1/8 5/32 x 1/16 3/8 x 1/8 7/32 x 5/64 1/2 x 5/64	2 3/8

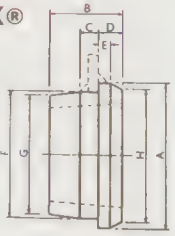
Bush. No.	Bore Sizes Available	Keyway Width x Depth at Side	O.D. at Large End of Taper
2012 and 2017	12/16 3/4 1 1 1/16 1 1/8 1 3/16 1 1/4 1 1/2 1 3/8 2	5/32 x 5/64 1/4 x 1/8 5/32 x 1/16 3/8 x 1/8 7/32 x 5/64 1/2 x 5/64	2 3/4
2517	1 1/16 1 1/8 1 3/16 1 1/4 1 1/2 1 3/8 1 3/4 2 2 1/4 2 3/8 2 1/2	5/32 x 5/64 1/4 x 1/8 5/32 x 1/16 3/8 x 1/8 7/32 x 5/64 1/2 x 5/64 3/8 x 5/64 3/8 x 1/16*	3 3/8
2525	1 1/16 1 1/8 1 3/16 1 1/4 1 1/2 1 3/8 1 3/4 2 2 1/4 2 3/8 2 1/2	1/4 x 1/8 5/32 x 1/16 3/8 x 1/8 7/32 x 5/64 1/2 x 5/64 3/8 x 5/64 3/8 x 1/16*	3 3/8
3020 and 3030	1 3/16 1 1/4 1 3/16 1 1/2 1 3/8 1 3/4 2 2 1/4 2 3/8 2 1/2 2 3/8 2 1/2 2 3/4 3	5/32 x 1/8 3/8 x 1/8 7/32 x 5/64 1/2 x 5/64 3/8 x 5/64 1/4 x 1/4	4 1/2
3535	1 3/8 1 3/4 2 2 1/4 2 3/8 2 1/2 2 3/4 3 3 1/8 3 1/2 3 3/8 3 1/2	3/8 x 1/8 7/32 x 5/64 1/2 x 5/64 3/8 x 5/64 1/4 x 1/4 5/16 x 1/4 7/16 x 1/4*	5

Bush. No.	Bore Sizes Available	Keyway Width x Depth at Side	O.D. at Large End of Taper
4040	1 1/8 1 1/4 2 2 1/16 2 1/8 2 1/4 2 3/16 2 1/4 2 3/8 3 3 1/16 3 1/8 3 1/4 3 3/8 3 1/2 4	7/32 x 5/64 1/4 x 5/64 3/8 x 5/64 1/2 x 1/4 5/8 x 1/4 1 x 1/4*	5 3/4
4545	2 1/16 2 1/8 2 1/4 2 3/16 2 1/4 2 3/8 3 3 1/16 3 1/8 3 1/4 3 3/8 3 1/2 4 4 1/16 4 1/8 4 1/2	3/8 x 3/16 1/2 x 1/4 5/8 x 5/16 1 x 1/2 1 1/4 x 1/4*	6 1/8
5050	2 3/16 2 1/4 2 3/8 3 3 1/16 3 1/8 3 1/4 3 3/8 3 1/2 4 4 1/16 4 1/8 4 1/2 5	1/2 x 1/4 5/8 x 5/16 1 x 1/2 1 1/4 x 1/4 1 1/4 x 5/16*	7
6050	3 12/16 to 4 1/2 4 5/16 to 5 1/2 5 5/16 to 6	1 x 1/2 1 1/4 x 1/2 1 1/2 x 3/4	9 1/4
7060	4 5/16 to 5 1/2 5 5/16 to 6 1/2 6 5/16 to 7	1 1/4 x 1/2 1 1/2 x 3/4 1 3/4 x 3/4	10 1/4
8065	5 1/16 to 5 1/2 5 5/16 to 6 1/2 6 5/16 to 7 1/2 7 5/16 to 8	1 1/4 x 1/2 1 1/2 x 3/4 1 3/4 x 3/4 2 x 3/4	11 1/4
10085	6 5/16 to 7 1/2 7 5/16 to 9 9 1/16 to 10	1 1/4 x 3/4 2 x 3/4 2 1/2 x 1/2	14 1/2
120100	7 5/16 to 9 9 1/16 to 11 11 1/16 to 12	2 x 3/4 2 1/2 x 1/2 3 x 1	17 1/2

TAPER-LOCK number system identifies the bore diameter and length through the bush. The first two digits of the four-figure numbers show the maximum bore in inches and tenths of an inch. The remaining two numbers show the length of the bush in inches and to the tenth corresponding to the first decimal. For example, the 2517 bush has a maximum bore of 2 1/4" and is 1 3/4" long. Where the first two numbers of differently numbered bushes are the same, then the bushes are interchangeable. Bushes 10085 and 120100 are extensions of the system on larger sizes.

All dimensions inches. All keyways are parallel to Brit. Std. 46: Part 1:1958 except those marked * which are slightly shallower.

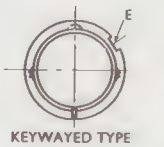
L1502 FENNER TAPER-LOCK® WELD-ON HUBS



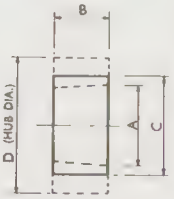
Hub. No.	Uses Bush No.	A	B	C	D	F
W12	1215	2 7/8	1 1/2	7/16	5/8	2.500/2.498
W16	1615	3 1/4	1 1/2	7/16	5/8	2.875/2.873
W20	2017	4	1 3/4	1/2	3/4	3.500/3.498
W25	2517	5	1 3/4	1/2	3/4	4.375/4.373
W30	3030	6	3	3/4	1	5.250/5.248
W35	3535	7 1/4	3 1/2	1	1 1/4	6.250/6.248
W40	4040	8 1/8	4	1 1/4	1 1/4	7.750/7.747
W45	4545	10	4 1/2	1 1/2	1 1/2	8.750/8.747
W50	5050	10 7/8	5	1 1/2	1 1/2	9.500/9.497
W60	6050	14 3/4	5	1 1/2	1 1/2	13.500/13.496
W70	7060	16 3/4	6	1 1/2	2	14.750/14.746
W80	8065	17 1/2	6 1/2	1 1/2	2	15.500/15.496
W100	10085	22	8 1/2	1 3/4	2	19.500/19.496
W120	120100	25 1/2	10	2	2	23.000/22.996

L1503 ADAPTORS FOR FENNER TAPER-LOCK BUSHES®

PLAIN TYPE



KEYWAYED TYPE



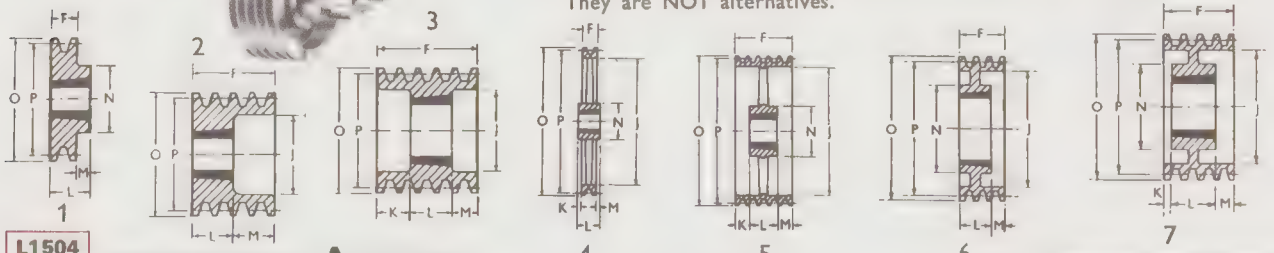
Use Bush No.	Adaptor No.	A	B	C*	D† 1	D† 2	D† 3
1008	1008P 1008K	1 23/64	7/8	1 1/2	2 11/16 2 7/8	2 7/16 2 5/8	2 3/16 2 3/8
1215	1215P 1215K	1 7/8	1 1/2	2 3/8	3 3/8 3 3/8	3 1/8 3 3/8	2 7/8 3 1/4
1610	1610P 1610K	2 1/4	1	2 3/4	4 1/8 4 1/8	3 3/4 4	3 3/8 3 3/8
1615	1615P 1615K	2 1/4	1 1/2	2 3/4	3 3/4 4	3 1/4 3 3/4	3 1/4 3 1/2
2517	2517P 2517K	3 3/8	1 3/4	4 1/8	5 3/8 5 7/8	5 1/4 5 1/2	4 3/4 5
2525	2525P 2525K	3 3/8	2 1/2	4 1/8	5 1/4 5 1/2	5 5 1/4	4 3/4 5
3030	3030P 3030K	4 1/4	3	5 1/8	7 7 3/8	6 1/2 6 7/8	6 1/8 6 1/2
3535	3535P 3535K	5	3 1/2	6 1/4	8 3/4 9 1/8	8 8 3/8	7 1/2 7 7/8
4040	4040P 4040K	5 3/4	4	7 1/4	10 3/4 11 1/8	9 3/4 10 1/8	9 9 3/8

DIMENSIONS INCHES

FENNER TAPER-LOCK® BUSHES AND PULLEYS

® Registered Trade Mark

PULLEY TYPES— These diagrams show the types and their type numbers to which reference is made in the Dimension Tables. They are NOT alternatives.



L1504 DIMENSIONS OF A SECTION

DIMENSIONS INCHES

Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width	Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width	Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width
		1	1215	1	0·75			1	1615	1	0·75			1	1615	4	0·75
		2	1215	1	1·31			2	1615	1	1·31			2	2517	4	1·31
3⅜	3·2	3	1215	2	1·88	5	4·8	3	1615	2	1·88	12⅜	12·2	3	2517	5	1·88
		4	1215	2	2·44			4	1615	2	2·44			4	2517	5	2·44
		5	1215	2	3·00			5	1615	2	3·00			5	2517	5	3·00
		1	1215	1	0·75			1	1615	1	0·75						
		2	1215	1	1·31			2	1615	1	1·31			1	1615	4	0·75
3¾	3·6	3	1215	2	1·88	5⅜	5·2	3	1615	2	1·88			2	2517	4	1·31
		4	1215	2	2·44			4	1615	2	2·44	14⅜	14·2	3	2517	5	1·88
		5	1215	2	3·00			5	1615	2	3·00			4	2517	5	2·44
														5	2517	5	3·00
		1	1215	1	0·75			1	1615	4	0·75						
		2	1215	1	1·31			2	1615	4	1·31						
4	3·8	3	1615	2	1·88	6⅜	6·2	3	1615	5	1·88			1	2517	4	0·75
		4	1615	2	2·44			4	1615	5	2·44			2	2517	4	1·31
		5	1615	2	3·00			5	1615	5	3·00	16⅜	16·2	3	2517	5	1·88
														4	2517	5	2·44
		1	1615	1	0·75			1	1615	4	0·75			5	2517	5	3·00
		2	1615	1	1·31			2	1615	4	1·31						
4¼	4·1	3	1615	2	1·88	7⅜	7·2	3	1615	5	1·88						
		4	1615	2	2·44			4	1615	5	2·44			1	2517	4	0·75
		5	1615	2	3·00			5	1615	5	3·00			2	2517	4	1·31
												18⅜	18·2	3	2517	5	1·88
		1	1615	1	0·75			1	1615	4	0·75			4	2517	5	2·44
		2	1615	1	1·31			2	1615	4	1·31			5	2517	5	3·00
4⅜	4·2	3	1615	2	1·88	8⅜	8·2	3	2517	5	1·88						
		4	1615	2	2·44			4	2517	5	2·44						
		5	1615	2	3·00			5	2517	5	3·00			1	2517	4	0·75
														2	2517	4	1·31
		1	1615	1	0·75			1	1615	4	0·75	20⅜	20·2	3	2517	5	1·88
		2	1615	1	1·31			2	1615	4	1·31			4	2517	5	2·44
4½	4·3	3	1615	2	1·88	9⅜	9·2	3	2517	5	1·88			5	2517	5	3·00
		4	1615	2	2·44			4	2517	5	2·44						
		5	1615	2	3·00			5	2517	5	3·00						
		1	1615	1	0·75			1	1615	4	0·75			1	2517	4	0·75
		2	1615	1	1·31			2	2517	4	1·31			2	2517	4	1·31
4¾	4·6	3	1615	2	1·88	10⅜	10·2	3	2517	5	1·88	24⅜	24·2	3	2517	5	1·88
		4	1615	2	2·44			4	2517	5	2·44			4	2517	5	2·44
		5	1615	2	3·00			5	2517	5	3·00			5	2517	5	3·00

L1505 DIMENSIONS OF B SECTION

Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width	Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width	Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width
		2	1615	2	1·75			2	1615	2	1·75			2	1615	2	1·75
		3	1615	2	2·50			3	1615	2	2·50			3	1615	2	2·50
5½	5·2	4	2517	3	3·25	6	5·7	4	2517	3	3·25	6½	6·2	4	2517	3	3·25
		5	2517	3	4·00			5	2517	3	4·00			5	2517	3	4·00
		6	2517	3	4·75			6	2517	3	4·75			6	2517	3	4·75
		2	1615	2	1·75			2	1615	2	1·75			2	1615	2	1·75
		3	1615	2	2·50			3	1615	2	2·50			3	1615	2	2·50
5¾	5·45	4	2517	3	3·25	6¼	5·95	4	2517	3	3·25	7	6·7	4	2517	3	3·25
		5	2517	3	4·00			5	2517	3	4·00			5	2517	3	4·00
		6	2517	3	4·75			6	2517	3	4·75			6	2517	3	4·75

DIMENSIONS OF B SECTION CONTINUED ON NEXT PAGE

DIMENSIONS OF B SECTION *Continued from previous page*

DIMENSIONS INCHES

Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width	Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width	Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width
		2	2517	3	1·75			2	2517	5	1·75			2	2525	4	1·75
		3	2517	3	2·50			3	2517	5	2·50			3	2525	5	2·50
7½	7·2	4	2525	3	3·25	11½	11·2	4	2525	5	3·25	21½	21·2	4	2525	5	3·25
		5	2525	3	4·00			5	2525	5	4·00			5	3030	5	4·00
		6	2525	3	4·75			6	2525	5	4·75			6	3030	5	4·75
		2	2517	5	1·75			2	2517	5	1·75			2	2525	4	1·75
		3	2517	5	2·50			3	2517	5	2·50			3	2525	5	2·50
8½	8·2	4	2525	5	3·25	12½	12·2	4	2525	5	3·25	24½	24·2	4	2525	5	3·25
		5	2525	5	4·00			5	2525	5	4·00			5	3030	5	4·00
		6	2525	5	4·75			6	2525	5	4·75			6	3030	5	4·75
		2	2517	5	1·75			2	2517	5	1·75			2	2525	4	1·75
		3	2517	5	2·50			3	2517	5	2·50			3	3030	4	2·50
9½	9·2	4	2525	5	3·25	15½	15·2	4	2525	5	3·25	30½	30·2	4	3030	5	3·25
		5	2525	5	4·00			5	2525	5	4·00			5	3030	5	4·00
		6	2525	5	4·75			6	2525	5	4·75			6	3535	5	4·75
		2	2517	5	1·75			2	2517	5	1·75			2	3030	4	1·75
		3	2517	5	2·50			3	2517	5	2·50			3	3030	4	2·50
10½	10·2	4	2525	5	3·25	18½	18·2	4	2525	5	3·25	36½	36·2	4	3030	5	3·25
		5	2525	5	4·00			5	2525	5	4·00			5	3535	5	4·00
		6	2525	5	4·75			6	2525	5	4·75			6	3535	5	4·75

L1506

DIMENSIONS OF C SECTION

Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width	Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width	Diameter Outside O	Diameter Pitch P	No. of Grooves	Bush No.	Pulley Type	Face Width
		2	2525	6	2·375			2	2525	6	2·375			2	3030	4	2·375
		3	2525	6	3·375			3	2525	6	3·375			3	3030	5	3·375
		4	3030	3	4·375			4	3030	7	4·375			4	3030	5	4·375
8¾	8·4	5	3030	3	5·375	10¼	10·15	5	3030	7	5·375	21¾	21·4	5	3535	5	5·375
		6	3030	3	6·375			6	3030	7	6·375			6	3535	5	6·375
		7	3535	3	7·375			7	3535	3	7·375			7	4040	5	7·375
		8	3535	3	8·375			8	3535	3	8·375			8	4040	5	8·375
		2	2525	6	2·375			2	2525	6	2·375			2	3535	4	2·375
		3	2525	6	3·375			3	2525	6	3·375			3	3535	5	3·375
		4	3030	3	4·375			4	3030	7	4·375			4	3535	5	4·375
9	8·65	5	3030	3	5·375	10¾	10·4	5	3030	7	5·375	24¾	24·4	5	3535	5	5·375
		6	3030	3	6·375			6	3030	7	6·375			6	4040	5	6·375
		7	3535	3	7·375			7	3535	3	7·375			7	4040	5	7·375
		8	3535	3	8·375			8	3535	3	8·375			8	4040	5	8·375
		2	2525	6	2·375			2	2525	5	2·375			2	3535	4	2·375
		3	2525	6	3·375			3	2525	5	3·375			3	3535	5	3·375
		4	3030	3	4·375			4	3030	5	4·375			4	3535	5	4·375
9¼	8·9	5	3030	3	5·375	11¾	11·4	5	3030	5	5·375	30¾	30·4	5	4040	5	5·375
		6	3030	3	6·375			6	3030	5	6·375			6	4040	5	6·375
		7	3535	3	7·375			7	3535	5	7·375			7	4040	5	7·375
		8	3535	3	8·375			8	3535	5	8·375			8	4040	5	8·375
		2	2525	6	2·375			2	2525	5	2·375						
		3	2525	6	3·375			3	2525	5	3·375			2	3535	4	2·375
		4	3030	3	4·375			4	3030	5	4·375			3	3535	5	3·375
9¾	9·4	5	3030	3	5·375	12¾	12·4	5	3030	5	5·375			4	4040	5	4·375
		6	3030	3	6·375			6	3030	5	6·375	36¾	36·4	5	4040	5	5·375
		7	3535	3	7·375			7	3535	5	7·375			6	4040	5	6·375
		8	3535	3	8·375			8	3535	5	8·375			7	4040	5	7·375
														8	4545	5	8·375
		2	2525	6	2·375			2	3030	4	2·375						
		3	2525	6	3·375			3	3030	5	3·375			2	3535	4	2·375
		4	3030	7	4·375			4	3030	5	4·375			3	3535	5	3·375
10	9·65	5	3030	7	5·375	15¾	15·4	5	3030	5	5·375			4	4040	5	4·375
		6	3030	7	6·375			6	3030	5	6·375	42¾	42·4	5	4040	5	5·375
		7	3535	3	7·375			7	3535	5	7·375			6	4545	5	6·375
		8	3535	3	8·375			8	3535	5	8·375			7	4545	5	7·375
														8	4545	5	8·375
		2	2525	6	2·375			2	3030	4	2·375						
		3	2525	6	3·375			3	3030	5	3·375			3	4040	4	3·375
		4	3030	7	4·375			4	3030	5	4·375			4	4545	5	4·375
10¼	9·9	5	3030	7	5·375	18¾	18·4	5	3535	5	5·375	48¾	48·4	5	4545	5	5·375
		6	3030	7	6·375			6	3535	5	6·375			6	4545	5	6·375
		7	3535	3	7·375			7	3535	5	7·375			7	4545	5	7·375
		8	3535	3	8·375			8	3535	5	8·375			8	4545	5	8·375

FENNER TAPER-LOCK® SPACESAVER DRIVES

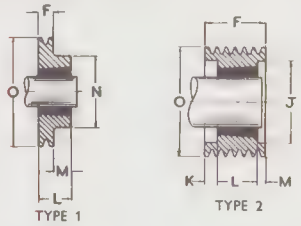
L1507 ALPHA SECTION WEDGE-BELT PULLEY DIMENSIONS

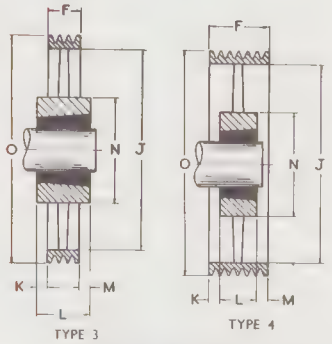
ALL DIMENSIONS INCHES

Outside Dia. (O)	No. of Grooves	Bush No.	Pulley Type	Pulley Weight
2·65	1	1108	1	0·7
	2	1108	2	0·9
	3	1108	2	1·0
2·80	1	1108	1	0·9
	2	1108	2	1·0
	3	1108	2	1·3
3·00	1	1108	1	0·9
	2	1210	1†	1·1
	3	1210	2	1·3
3·15	1	1210	1	1·0
	2	1210	1†	1·3
	3	1210	2	1·5
	4	1210	2	1·9
3·35	1	1210	1	1·2
	2	1610	1†	1·3
	3	1610	2	1·5
	4	1610	2	2·0
	5	1610	2	2·6
3·87	1	1610	1	1·6
	2	1610	2	2·0
	3	1610	2	2·3
	4	1610	2	2·9
	5	1610	2	3·5
4·50	1	1610	1	2·1
	2	1610	2	3·0
	3	1610	2	3·6
	4	1610	2	5·1
	5	2012	2	4·6
	6	2012	2	5·5
	8	2012	2	6·5
4·75	1	1610	2	2·6
	2	1610	2	3·3
	3	2012	2	3·9
	4	2012	2	4·6
	5	2012	2	5·2
	6	2517	2	4·6
	8	2517	2	5·6
	10	2525	2	7·3
5·00	1	1610	1	3·0
	2	1610	2	3·9
	3	2012	2	4·4
	4	2012	2	5·1
	5	2012	2	5·8
	6	2517	2	5·6
	8	2517	2	6·7
	10	2525	2	8·4
5·30	1	1610	1	3·4
	2	1610	2	4·4
	3	2012	2	5·0
	4	2517	2	5·3
	5	2517	2	5·5
	6	2517	2	6·3
	8	2517	2	7·5
	10	2517	2	9·0
5·60	1	1610	1	3·8
	2	1610	2	4·9
	3	2012	2	6·0
	4	2517	2	6·4
	5	2517	2	7·1
	6	2517	2	7·7
	8	2517	2	9·2
	10	2517	2	11·0
6·00	1	1610	1	4·5
	2	1610	2	6·0
	3	2012	2	7·5
	4	2517	2	7·5
	5	2517	2	8·0
	6	2517	2	11
	8	2517	2	12
	10	2517	2	14
6·90	1	1610	1	6·0
	2	2012	1	8·7
	3	2012	2	11
	4	2517	2	13
	5	2517	2	14
	6	2517	2	15
	8	2517	2	17
	10	2517	2	19
8·00	1	2012	1	6·3
	2	2012	3	7·9
	3	2012	4	9·5
	4	2517	4	12
	5	2517	4	13
	6	2517	4	15
	8	2517	4	17
	10	2517	4	20
10·6	1	2012	1	11
	2	2012	3	13
	3	2012	4	16
	4	2517	4	18
	5	2517	4	21
	6	2517	4	24
	8	2517	4	28
	10	3020	4	33
12·2	1	2012	3	11
	2	2012	3	13
	3	2517	3	13
	4	2517	4	21
	5	2517	4	25
	6	2517	4	28
	8	3020	4	38
	10	3020	4	46
14·0	1	2012	3	14
	2	2012	3	16
	3	2517	3	22
	4	2517	4	28
	5	2517	4	29
	6	2517	4	32
	8	3030	4	45
	10	3030	4	50
19·0	1	2517	3	25
	2	2517	3	26
	3	2517	3	34
	4	2517	4	36
	5	3030	3	47
	6	3030	3	53
	8	3030	4	62
	10	3535	4	79
25·0	2	2517	3	42
	3	2517	3	47
	4	3030	3	61
	5	3030	3	66
	6	3030	3	71
	8	3535	4	107
	10	3535	4	109
35·5	3	3020	3	82
	4	3030	3	97
	5	3535	3	110
	6	3535	3	120
	8	3535	4	139
	10	4040	4	180

Pulley weights are in pounds and do not include weight of the Bush

† On these sizes the Bush is 0·25 underflush at the small end of the taper.





PULLEY FACE WIDTHS

No. of Grooves	1	2	3	4	5	6	8	10
F	$\frac{11}{16}$	*1$\frac{3}{32}$	1$\frac{1}{2}$	1$\frac{33}{32}$	2$\frac{5}{16}$	2$\frac{33}{32}$	3$\frac{17}{32}$	4$\frac{11}{32}$

*$\frac{3}{8}$ for pulleys 10·6 and 12·2

$\frac{11}{16}$ for pulleys 14·0 and over

L1508 WEDGE-BELT SIZES AND PULLEY GROOVING DIMENSIONS

Sizes and weights of Spacesaver Wedge-Belts

All pitch lengths are given in inches

ALPHA SECTION				BETA SECTION				DELTA SECTION	
Symbol Number	Pitch Length	Symbol Number	Pitch Length	Symbol Number	Pitch Length	Symbol Number	Pitch Length	Symbol Number	Pitch Length
250	25	630	63	500	50	1400	140	1000	100
280	28	670	67	530	53	1500	150	1120	112
300	30	710	71	560	56	1600	160	1250	125
315	31·5	730	73	630	63	1700	170	1400	140
355	35·5	750	75	710	71	1800	180	1600	160
370	37	800	80	800	80	1900	190	1800	180
400	40	850	85	850	85	2000	200	2000	200
425	42·5	900	90	900	90	2120	212	2240	224
450	45	950	95	950	95	2240	224	2500	250
475	47·5	1000	100	1000	100	2360	236	2800	280
500	50	1060	106	1060	106	2500	250	3150	315
530	53	1120	112	1120	112	2800	280	3550	355
560	56	1180	118	1180	118	3150	315	4000	400
600	60	1250	125	1250	125			4500	450
617	61·7	1400	140	1320	132				

FENNER TAPER-LOCK® SPACESAVER DRIVES

L1509

BETA SECTION WEDGE-BELT PULLEY DIMENSIONS

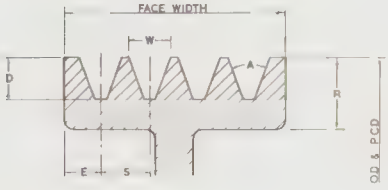
ALL DIMENSIONS INCHES

Outside Dia. (O)	No. of Grooves	Bush No.	Pulley Type	Pulley Weight
7·10	2	2517	2	12
	3	2517	2	15
	4	2517	2	18
	5	3020	2	19
	6	3020	2	22
	8	3020	2	24
7·50	2	2517	2	13
	3	2517	2	16
	4	2517	2	20
	5	3020	2	18
	6	3020	2	23
	8	3020	2	28
8·00	2	2517	2	16
	3	2517	2	19
	4	2517	2	23
	5	3020	2	24
	6	3020	2	25
	8	3020	2	33
8·50	2	2517	2	19
	3	2517	2	22
	4	3020	2	25
	5	3020	2	28
	6	3535	2	34
	8	3535	2	37
9·00	2	2517	4	16
	3	2517	4	25
	4	3020	2	28
	5	3535	2	37
	6	3535	2	40
	8	3535	2	47
	10	3535	2	53
10·3	2	2517	4	20
	3	2517	4	24
	4	3020	2	38
	5	3535	2	53
	6	3535	2	57
	8	3535	2	65
	10	3535	2	73
11·8	2	2517	4	23
	3	3020	4	32
	4	3535	3	45
	5	3535	4	50
	6	3535	4	56
	8	4040	2	92
	10	4040	2	102
12·5	2	2517	4	26
	3	3020	4	36
	4	3535	3	49
	5	3535	4	54
	6	3535	4	60
	8	4040	4	83
	10	4040	4	94
13·2	2	3020	3	31
	3	3020	4	40
	4	3535	3	54
	5	3535	4	59
	6	4040	4	73
	8	4040	4	94
	10	4545	2	130
14·0	2	3020	3	34
	3	3535	3	51
	4	3535	3	60
	5	3535	4	64
	6	4040	4	78
	8	4040	4	95
	10	4545	4	112
15·0	2	3020	3	37
	3	3535	3	55
	4	3535	3	63
	5	3535	4	69
	6	4040	4	89
	8	4040	4	103
	10	4545	4	125
16·0	2	3020	3	41
	3	3535	3	59
	4	3535	3	66
	5	3535	4	74
	6	4040	4	94
	8	4040	4	107
	10	4545	4	132
18·5	2	3020	3	54
	3	3535	3	71
	4	4040	3	92
	5	4040	3	109
	6	4545	3	123
	8	4545	4	148
	10	4545	4	167
21·2	2	3020	3	71
	3	3535	3	91
	4	4040	3	118
	5	4040	3	128
	6	4545	3	148
	8	4545	4	168
	10	4545	4	188
28·0	2	3535	3	108
	3	3535	3	112
	4	4040	3	136
	5	4040	3	155
	6	4545	3	187
	8	4545	4	232
	10	4545	4	255
37·5	3	4040	3	179
	4	4040	3	208
	5	4545	3	242
	6	4545	3	262
	8	4545	4	314
	10	5050	4	378
50·0	3	4040	3	277
	4	4545	3	318
	5	4545	3	351
	6	4545	3	384
	8	5050	4	467
	10	5050	4	544

Pulley weights are in pounds and do not include the weight of the Bush

PULLEY FACE WIDTHS							
No. of Grooves	2	3	4	5	6	8	10
F	1 11/16	2 3/8	3 1/16	3 3/4	4 7/16	5 1/8	7 3/16

DIMENSIONS FOR GROOVING



GROOVE DETAILS

Belt Section	Dia.	Groove Angle A ± ¼	W ± 0·003"*	D −0 +0·010"	E ± 0·010"	S ± 0·005"†	R Min.
ALPHA	Under 3·5	36	0·350"	0·350"	11/32"	12/32"	3/8"
	3·5 to 6·0	38					
	6·01 to 12·0	40					
	Over 12·0	42					
	Under 10·0	38					
BETA	10·0 to 16·0	40	0·600"	0·600"	½"	1 1/16"	1"
	Over 16·0	42					
	Under 16·0	38					
DELTA	16·0 to 22·4	40	1·000"	1·000"	¾"	1⅛"	1½"
	Over 22·4	42					

*The top widths of grooves in any one pulley must not vary by more than 0·002"

†The tolerance on dimension S is not cumulative, it applies to the centres of any two grooves whether consecutive or not.

L1510

DELTA SECTION WEDGE-BELT PULLEY DIMENSIONS

Pulley Outside Dia.	Number of Grooves and Pulley Face Width							
	6		8		10		12	
	7⅛		9⅜		11⅛		13⅞	
	Max. Bore	Boss Length	Max. Bore	Boss Length	Max. Bore	Boss Length	Max. Bore	Boss Length
13·2								
13·6								
14·0					4½	8	4½	8
14·5								
15·0								
15·5								
16·0								
16·5								
17·0								
17·5								
18·0	4½	7⅛	4½	7⅛	5	8½	5	8½
18·5								
19·0								
19·5								
20·6								
21·8								
23·0	5		5		5½	8½	5½	8½
24·3								

Above Pulleys have Solid or Plate Centre with Boss Flush one side

Pulleys 28·0 to 50·0 inclusive have six arms and a Central Boss

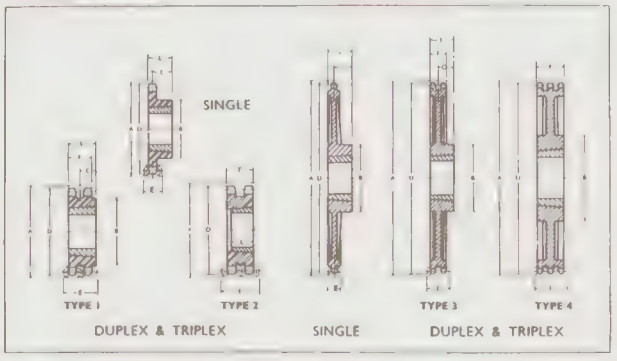
Dimension Details available on request

TAPER-LOCK® STEEL PINIONS AND CAST IRON WHEELS

	No. of Teeth	Pitch Dia.	Ref. No.	Bush Size	Max. Bore	A	B	C	D	E	L
FOR USE WITH 3/8" PITCH SINGLE ROLLER CHAIN											
Pinion	13	1·567	31 13	*	7/8	1·89	1 5/16	0·77	1·73		7/8
	15	1·804	31 15	*	1	2·13	1 1/2	0·77	1·96		7/8
	17	2·041	31 17	1008	1	2·37	1 3/8	0·77	2·20		7/8
	19	2·278	31 19	1008	1	2·60	1 1/2	0·77	2·44	0·60	7/8
	21	2·516	31 21	1008	1	2·84	1 1/2	0·77	2·67		7/8
	23	2·754	31 23	1210	1 1/4	3·08	2 1/8	0·90	2·91		1
	25	2·992	31 25	1210	1 1/4	3·32	2 1/8	0·90	3·15		1
Wheel	38	4·451	31 38	1210	1 1/4	4·86	2 3/4	0·73	4·70		1
	57	6·807	31 57	1210	1 1/4	7·13	3 1/4	0·73	6·97	0·60	1
	76	9·074	31 76	1210	1 1/4	9·40	3 1/4	0·73	9·23		1
NOTE: It is essential that a side-fitting key be used when assembling a TAPER-LOCK Bush and chain pinion or wheel on its shaft.											
*31-13 and 31-15 pinions are too small to use a TAPER-LOCK Bush. They are stocked bored to size in 1/8" increments from 1/2" upwards.											
FOR USE WITH 1/2" PITCH SINGLE ROLLER CHAIN											
Pinion	13	2·089	41 13	*	1	2·56	1 1/2	0·74	2·29		7/8
	15	2·405	41 15	1008	1	2·88	1 1/2	0·74	2·61		7/8
	17	2·721	41 17	1210	1 1/4	3·19	2 1/8	0·86	2·93		1
	19	3·038	41 19	1210	1 1/4	3·51	2 1/8	0·86	3·24	0·74	1
	21	3·355	41 21	1610	1 3/8	3·83	2 3/8	0·86	3·56		1
	23	3·672	41 23	1610	1 3/8	4·14	3	0·86	3·88		1
	25	3·989	41 25	1610	1 3/8	4·46	3	0·86	4·19		1
Wheel	38	6·055	41 38	2012	2	6·52	4	0·95	6·26		1 1/4
	57	9·076	41 57	2012	2	9·54	4 3/8	0·95	9·28	0·74	1 1/4
	76	12·099	41 76	2012	2	12·57	4 3/8	0·95	12·30		1 1/4
*41-13 Pinions are too small to use a TAPER-LOCK Bush. They are stocked bored to size in 1/8" increments from 1/2" to 1"											
FOR USE WITH 5/8" PITCH SINGLE ROLLER CHAIN											
Pinion	13	2·612	51 13	1008	1	3·20	1 1/2	0·70	2·96		7/8
	15	3·006	51 15	1210	1 1/4	3·59	2 1/8	0·83	3·32		1
	17	3·401	51 17	1610	1 3/8	3·99	2 3/8	0·83	3·69		1
	19	3·797	51 19	1610	1 3/8	4·38	3	0·83	4·08	0·88	1
	21	4·193	51 21	1610	1 3/8	4·78	3	0·83	4·53		1
	23	4·590	51 23	1610	1 3/8	5·17	3	0·83	4·91		1
	25	4·987	51 25	2012	2	5·57	3 7/16	1·08	5·30		1 1/4
Wheel	38	7·568	51 38	2012	2	8·15	4	0·88	7·86		1 1/4
	57	11·346	51 57	2012	2	11·93	4 3/8	0·88	11·63	0·88	1 1/4
	76	15·124	51 76	2012	2	15·71	4 3/8	0·88	15·40		1 1/4
FOR USE WITH 3/4" PITCH SINGLE ROLLER CHAIN											
Pinion	13	3·134	61 13	1210	1 1/4	3·79	2 1/8	0·74	3·50		1
	15	3·607	61 15	1610	1 3/8	4·26	2 3/8	0·74	3·98		1
	17	4·082	61 17	1610	1 3/8	4·74	3	0·74	4·45		1
	19	4·557	61 19	2012	2	5·21	3 7/16	1·04	4·93	0·96	1 1/4
	21	5·032	61 21	2517	2 1/4	5·69	4	1·54	5·40		1 1/4
	23	5·508	61 23	2517	2 1/4	6·16	4 1/4	1·54	5·88		1 1/4
	25	5·984	61 25	2517	2 1/4	6·64	4 1/4	1·54	6·35		1 1/4
Wheel	38	9·082	61 38	2517	2 1/4	9·74	4 5/8	1·31	9·44		1 1/4
	57	13·615	61 57	2517	2 1/4	14·27	4 5/8	1·31	13·98	0·96	1 1/4
	76	18·149	61 76	2517	2 1/4	18·80	4 5/8	1·31	18·52		1 1/4
FOR USE WITH 1" PITCH SINGLE ROLLER CHAIN											
Pinion	13	4·179	81 13	1615	1 3/8	5·00	2 5/8	1·19	4·69		1 1/4
	15	4·810	81 15	1615	1 3/8	5·62	3	1·19	5·32		1 1/4
	17	5·442	81 17	2012	2	6·25	3 7/16	0·94	5·95		1 1/4
	19	6·076	81 19	2517	2 1/4	6·89	4 1/4	1·44	6·59	1·62	1 1/4
	21	6·710	81 21	2517	2 1/4	7·52	4 1/4	1·44	7·22		1 1/4
	23	7·344	81 23	2517	2 1/4	8·16	4 1/4	1·44	7·85		1 1/4
	25	7·979	81 25	2517	2 1/4	8·79	4 1/4	1·44	8·44		1 1/4
Wheel	38	12·110	81 38	3020	3	12·92	6 1/4	1·50	12·62		2
	57	18·153	81 57	3020	3	18·98	6 1/2	1·50	18·66	1·62	2
	76	24·198	81 76	3020	3	25·01	6 1/2	1·50	24·71		2

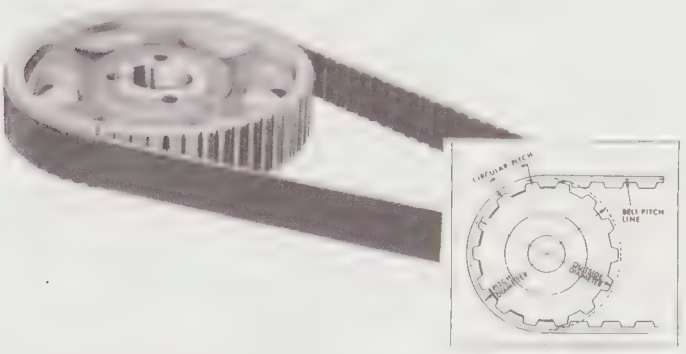
DIMENSIONS INCHES

L1511 PINIONS L1512 WHEELS



	No.of Teeth	Pitch Dia.	Ref. No.	Bsh. Size	Max. Bore	Spkt. Type	A	B	C	D	E	F	L
FOR USE WITH 3/8" PITCH DUPLEX ROLLER CHAIN													
Pinion	15	1·804	32 15	*	1	1	2·13	1 1/16	0·94	1·96	1·00	0·61	1 1/4
	17	2·041	32 17	1008	1	1	2·37	1 3/8	0·57	2·20	1·00	0·61	7/8
	19	2·278	32 19	1008	1	1	2·60	1 3/16	0·57	2·44	1·00	0·61	7/8
	21	2·516	32 21	1008	1	1	2·84	1 1/2	0·57	2·67	1·00	0·61	7/8
	23	2·754	32 23	1210	1 1/4	1	3·08	2 1/16	0·69	2·91	1·00	0·61	1
	25	2·992	32 25	1210	1 1/4	1	3·32	2 1/16	0·69	3·15	1·00	0·61	1
Wheel	38	4·541	32 38	1610	1 3/8	1	4·86	3	0·69	4·70	1·00	0·61	1
	57	6·807	32 57	1610	1 3/8	3	7·13	3 1/4	0·69	6·97	1·00	0·61	1
	76	9·074	32 76	1610	1 3/8	3	9·40	3 1/2	0·69	9·23	1·00	0·61	1
*32-15 Pinions are too small to use a TAPER-LOCK Bush. They are stocked bored to size in 1/8" increments from 1/2" to 1"													
FOR USE WITH 1/2" PITCH DUPLEX ROLLER CHAIN													
Pinion	15	2·405	42 15	1008	1	1	2·88	1 7/8	0·46	2·61	1·29	0·83	7/8
	17	2·721	42 17	1210	1 1/4	1	3·19	2 1/16	0·58	2·93	1·29	0·83	1
	19	3·038	42 19	1210	1 1/4	1	3·51	2 1/4	0·58	3·24	1·29	0·83	1
	21	3·355	42 21	1610	1 3/8	1	3·83	2 1/16	0·58	3·56	1·29	0·83	1
	23	3·672	42 23	1610	1 3/8	1	4·14	3 1/8	0·58	3·88	1·29	0·83	1
	25	3·989	42 25	2012	2	1	4·46	3 7/16	0·83	4·19	1·29	0·83	1 1/4
Wheel	38	6·055	42 38	2012	2	1	6·52	4	0·83	6·26	1·29	0·83	1 1/4
	57	9·076	42 57	2012	2	3	9·54	4 3/8	0·83	9·28	1·29	0·83	1 1/4
	76	12·099	42 76	2012	2	3	12·57	4 3/8	0·83	12·30	1·29	0·83	1 1/4
FOR USE WITH 1" PITCH DUPLEX ROLLER CHAIN													
Pinion	15	4·810	82 15	2012	2	2	5·62	—	—	5·32	2·85	1·88	1 1/4
	17	5·442	82 17	2517	2 1/2	2	6·25	—	—	5·95	2·85	1·88	1 1/4
	19	6·076	82 19	2517	2 1/2	2	6·89	—	—	6·59	2·85	1·88	1 1/4
	21	6·701	82 21	3020	3	1	7·52	5 3/8	1·06	7·22	2·85	1·88	2
	23	7·344	82 23	3020	3	1	8·16	6 1/2	1·06	7·85	2·85	1·88	2
	25	7·979	82 25	3020	3	1	8·79	6 23/32	1·06	8·49	2·85	1·88	2
Wheel	38	12·110	82 38	3030	3	3	12·92	5 3/4	2·06	12·62	2·85	1·88	3
	57	18·153	82 57	3535	3 1/2	3	18·98	7	2·56	18·66	2·85	1·88	3 1/2
	76	24·198	82 76	3535	3 1/2	3	25·01	7	2·56	24·71	2·85	1·88	3 1/2

L1513 FENNER TIMING BELT DRIVES



The following nomenclature is used to identify a Fenner Timing Belt.

(1) Length. The first figures of the code number are obtained by taking the pitch length in inches and multiplying by 10.

(2) Pitch of the teeth. The letters indicate the pitch as follows:

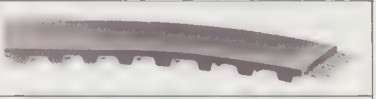
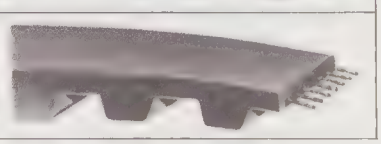
		Widths
XL	Extra light $\frac{1}{5}$″ pitch.	$\frac{1}{2}$″, $\frac{3}{4}$″ and 1″
L	Light $\frac{3}{8}$″ pitch.	$\frac{3}{4}$″, 1″, 1$\frac{1}{2}$″, 2″ and 3″
H	Heavy $\frac{1}{2}$″ pitch.	2″, 3″ and 4″
XH	Extra Heavy $\frac{7}{8}$″ pitch.	

(3) Width of the Belt. The figures following the letters show the actual width in inches multiplied by 100.

EXAMPLE: A 45″ pitch length belt, $\frac{1}{2}$″ pitch (Heavy) and 1$\frac{1}{2}$″ wide would be designated by the code number 450 H150.

FENNER TIMING BELTS AND PULLEYS

BELT PITCH

'XH' $\frac{7}{8}$ inch pitch extra-heavy duty	
'XL' $\frac{1}{5}$ inch pitch extra-light duty	
'L' $\frac{3}{8}$ inch pitch light duty	
'H' $\frac{1}{2}$ inch pitch heavy duty	

PULLEYS

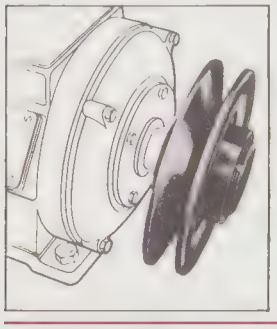
Standard Pulleys are made from Cast Iron Grade 17, except some of the smaller sizes which are of mild steel. The blanks are accurately machined and the teeth are generated to tolerances which ensure correct meshing with the belt.

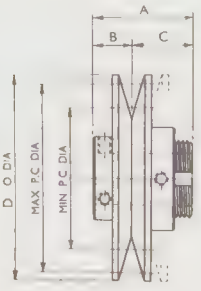
In every timing belt drive at least one pulley requires to be flanged, and for reasons of economy, it is usual to have the smaller pulley flanged. Flanges are flared to ensure correct entry of the belt.

Both pulleys should be flanged if the drive centre distance is more than eight times the diameter of the smaller pulley, and certainly when the drive is to be used on vertical shafts.

L1514 STATIONARY ADJUSTABLE VARIABLE-SPEED PULLEYS

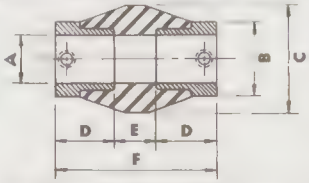
This small Stationary Adjustable Variable-Speed Pulley, which is designed for use in conjunction with standard industrial V-Belts, enables the pitch diameter of the pulley to be varied within a limited range, the adjustment being made when the pulley is stationary. It allows small adjustments in driven speed to be made to suit changing operating conditions and enables a more exact driven speed to be obtained than would be possible using standard V-Pulleys.





Unit	Type of V-Belt	Max. P.C.D.	Min. P.C.D.	D	A	B	C	Dia. Grub Screw	Max. Bore inch	Max. Bore mm
LP250	2000 (FZ)	2·34	1·46	$2\frac{1}{2}$	$1\frac{7}{16}$	$\frac{3}{16}$	$\frac{7}{8}$	$\frac{3}{16}$	$\frac{5}{8}$	16
LP325	3000 (FA)	3·05	1·86	$3\frac{1}{4}$	$1\frac{7}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{4}$	19
	A	3·08	2·02							
LP362	3000 (FA)	3·42	2·24	$3\frac{3}{8}$	$1\frac{7}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$	$\frac{1}{4}$	1	25
	A	3·45	2·39							
LP400	3000 (FA)	3·80	2·61	4	$1\frac{7}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$	$\frac{1}{4}$	1	25
	A	3·83	2·77							
LP450	3000 (FA)	4·30	3·11	$4\frac{1}{2}$	$1\frac{7}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$	$\frac{1}{4}$	1	25
	A	4·33	3·27							
LP500	3000 (FA)	4·80	3·61	5	$1\frac{7}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$	$\frac{1}{4}$	$1\frac{1}{4}$	32
	A	4·83	3·77							
LP550	3000 (FA)	5·30	4·11	$5\frac{1}{2}$	$1\frac{7}{8}$	$\frac{3}{4}$	$1\frac{1}{8}$	$\frac{1}{4}$	$1\frac{1}{4}$	32
	A	5·33	4·27							
LP600	B	5·70	4·28	6	$2\frac{1}{8}$	$\frac{27}{32}$	$1\frac{9}{32}$	$\frac{1}{4}$	$1\frac{1}{4}$	32
LP650	B	6·20	4·78	$6\frac{1}{2}$	$2\frac{1}{8}$	$\frac{27}{32}$	$1\frac{9}{32}$	$\frac{1}{4}$	$1\frac{1}{4}$	32
LP700	B	6·70	5·28	7	$2\frac{1}{8}$	$\frac{27}{32}$	$1\frac{9}{32}$	$\frac{1}{4}$	$1\frac{1}{2}$	38
LP750	B	7·20	5·78	$7\frac{1}{2}$	$2\frac{1}{8}$	$\frac{27}{32}$	$1\frac{9}{32}$	$\frac{1}{4}$	$1\frac{1}{2}$	38

L1515 FRACTIONAL HORSE-POWER FLEXIBLE COUPLINGS

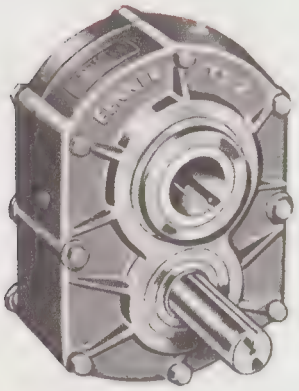


Shafts must not extend into space "E"

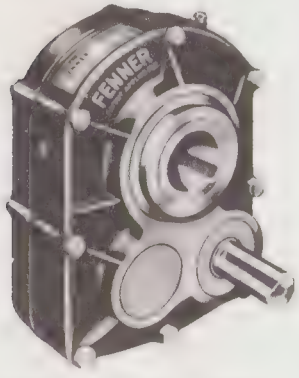
Part No.	Horse Power Rating at 1440 R.P.M.	A	B	C	D	E	F	Setscrew Size	Bore Tolerance
M134/$\frac{1}{8}$	$\frac{1}{8}$HP	$\frac{1}{2}$″	$\frac{7}{8}$″	$1\frac{1}{4}$″	$\frac{27}{32}$″	$\frac{5}{16}$″	2″	$\frac{1}{4}$″ Whit.	+·001″ −·000″
M134/$\frac{1}{2}$	$\frac{1}{2}$HP	$\frac{1}{2}$″	$1\frac{1}{8}$″	$1\frac{5}{8}$″	$\frac{13}{16}$″	$\frac{3}{8}$″	$2\frac{1}{2}$″	$\frac{1}{4}$″ Whit.	+·0015″ −·0000″
M134/$\frac{1}{3}$	$\frac{1}{3}$HP	$\frac{5}{8}$″	$1\frac{3}{8}$″	$1\frac{13}{16}$″	1″	$\frac{11}{16}$″	$2\frac{11}{16}$″	$\frac{5}{16}$″Whit.	+·0015″ −·0000″
M134/$\frac{3}{4}$	$\frac{3}{4}$HP	$\frac{3}{4}$″	$1\frac{1}{2}$″	2″	$1\frac{1}{16}$″	$\frac{3}{4}$″	$2\frac{7}{8}$″	$\frac{5}{16}$″Whit.	+·0015″ −·0000″

DIMENSIONS INCHES

L1516 TORQUE-ARM SHAFT MOUNTED SPEED REDUCER



SINGLE REDUCTION REDUCER



DOUBLE REDUCTION REDUCER

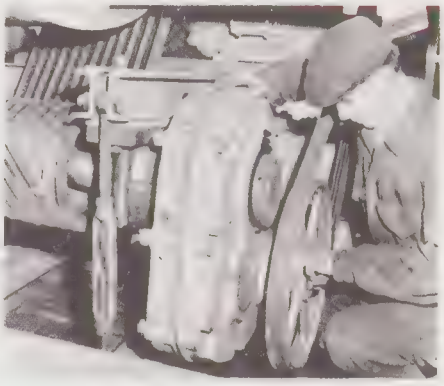
The Fenner Torque-Arm Speed Reducer offers an ideal method of obtaining speed reduction. The Torque-Arm Reducer is mounted directly on the shaft to be driven instead of the conventional mounting. This eliminates the use of (1) a flexible coupling, (2) a belt take-up and (3) a reducer foundation.

The Torque-Arm Speed Reducer, which has a fixed ratio of reduction, is combined with a V-Belt drive. Depending upon the sizes of the pulleys used a wide choice of output speeds is possible.

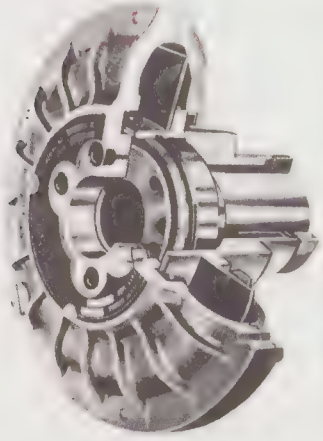
The shaft on which the reducer is to be mounted passes through the entire length of the sleeve, the unit being located by two steel locking collars. Bushes keyed into the sleeve adapt it to the given shaft size. The torque-arm anchors the reducer and provides quick, easy adjustment of the V-Belts by means of its turnbuckle. The exacting job of lining-up is thus eliminated.

The unit is not a variable speed drive but a change in speed can always be attained by changing one of the TAPER-LOCK® pulleys in the drive.

Sizes available range from TD 0 suitable for shafts as small as $\frac{3}{4}$″ diameter (20mm), to the No. 10 size for shafts up to 6″ diameter (150mm).
Output H.P. Range $\frac{1}{8}$ to 150 H.P.

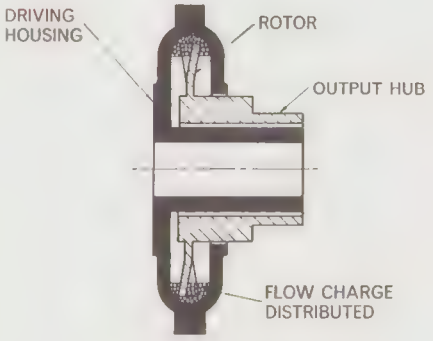


L1517 FENNER POWDER COUPLINGS THE DRY FLUID DRIVE



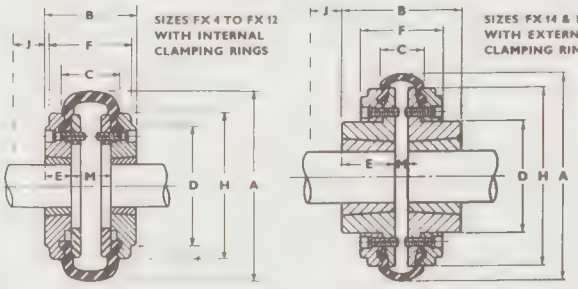
Powder Couplings are designed to allow the prime mover to attain speed under reduced loading conditions on high inertia drives and will give reliable and sensitive overload protection.

The coupling consists of: 1, a driving housing and hub which is keyed to the shaft of the prime mover; 2, a hardened steel corrugated rotor located centrally in the housing and connected to the output hub on to which a flexible coupling, V-pulley, chain sprocket or gear pinion may be fitted; and 3, a measured quantity of graphite-lubricated steel shot which provides the transmission medium, and is known as the 'flow charge'. Couplings can be supplied to cater for drives up to 7,500 H.P.



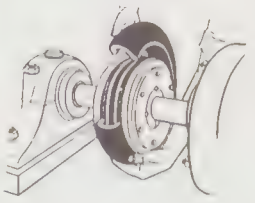
L1518 FENNER "FENAFLEX"® COUPLING

ALL DIMENSIONS INCHES



Standard Flange Arrangement

Through Bore Coupling Suffix "B"
Also available Half Reverse and Full Reverse Flange



The flexing member can be replaced without moving driver or driven machine.
When fitting the tyre always leave a gap of approximately $\frac{1}{16}$" (1·5mm) between the two ends.

SELECTION DATA: common to couplings using cast-iron or steel flanges and spacers

Max. rev/min	Max. Bore			H.P. per 100 rev/min	H.P. at Various Motor Speeds			Average Torsional Stiffness lbf. in/degree
	With Bushes	Through Bore Type						
		B	SB		1440	960	720	
4500	1	1⅛	—	0·30	4·32	2·88	2·16	120
4500	1½	1½	—	0·75	10·8	7·20	5·40	160
4000	1⅜	1¾		1·49	21·4	14·3	10·7	290
3600	1⅝	2	1⅜	2·28	32·8	21·8	16·4	530
3100	2	2½	2½	3·55	51·1	34·0	25·5	670
2750	2½	3	2⅜	5·13	72·4	49·3	36·9	820
2600	2½	3¼	3⅛	7·10	99·0	68·2	51·1	1000
2300	2½	3½	3½	10·0	131	96·0	72·0	2200
2050	3	4	3⅜	16·6	208	159	119	3900
1800	3½	5	4⅞	26·4	306	250	190	5500
1600	4	5½	5½	43·7	453	390	315	9400
1300	4½	7	—	110	—	917	763	15000

° Wrench clearance necessary for tightening bush on to shaft.
† M is the normal distance between shafts.

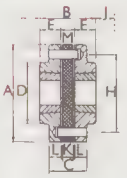
DIMENSIONS

Coupling Size	Bush Size	A	B	D	E	H	* J	† M
FX 4	1008	4⅛	2⅜	—	⅞	3¼	1¼	⅞
FX 5	1210	5¼	3	3⅛	1	3 1/16	1¼	1
FX 6	1610	6½	3 7/16	4 1/16	1	4 1/16	1¼	1 7/16
FX 7	1610	7⅜	3 7/16	4⅜	1	5 1/16	1¼	1 9/16
FX 8	2012	8 7/16	4 7/16	5½	1¼	6 9/16	1⅜	1 11/16
FX 9	2517	9½	5 7/16	6½	1⅜	7 7/16	1½	1 13/16
FX 10	2517	10	5⅜	7½	1⅜	8¼	1½	1⅞
FX 11	2517	11	4½	7½	1⅜	9 3/16	1½	1
FX 12	3020	12⅜	5 7/16	8⅜	2	10⅜	1⅞	1 7/16
FX 14	3535	14⅛	7⅞	7 1/16	3½	12½	2⅛	⅞
FX 16	4040	15⅞	8⅞	8½	4	13⅜	2½	⅞
FX 20	4545	20	10 5/16	10½	4½	16⅞	2⅝	1 7/16

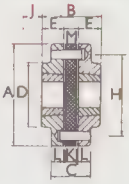
L1519 DISC-TYPE COUPLINGS

H.P. RATINGS AT VARIOUS REV/MIN

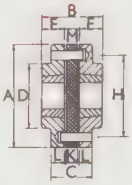
Speed Rev/min	NORMAL SERVICE Disc-type coupling size								SEVERE SERVICE Disc-type coupling size							
	2⅜	3¼	4	5¼	7	8	10	12½	2⅜	3¼	4	5¼	7	8	10	12½
10	0·03	0·06	0·10	0·22	0·47	1·07	2·49	7·20	0·02	0·04	0·06	0·14	0·32	0·72	1·66	4·80
20	0·07	0·12	0·19	0·43	0·94	2·15	4·98	14·2	0·05	0·08	0·13	0·29	0·63	1·43	3·32	9·50
40	0·14	0·24	0·38	0·86	1·89	4·30	9·96	27·8	0·09	0·16	0·26	0·57	1·26	2·87	6·64	18·5
60	0·21	0·36	0·58	1·29	2·83	6·45	14·9	40·5	0·14	0·24	0·39	0·86	1·89	4·30	10·0	27·0
80	0·28	0·48	0·77	1·72	3·78	8·60	19·9	52·5	0·19	0·32	0·52	1·14	2·52	5·73	13·3	35·0
100	0·35	0·60	0·96	2·15	4·72	10·8	24·9	64·0	0·23	0·40	0·64	1·43	3·15	7·17	16·6	42·0
150	0·50	0·87	1·39	3·12	6·85	15·6	36·1	92·3	0·33	0·58	0·93	2·08	4·56	10·4	24·1	61·5
200	0·64	1·11	1·78	3·98	8·75	19·9	46·2	118	0·43	0·74	1·19	2·64	5·82	13·3	30·8	78·6
250	0·77	1·33	2·12	4·73	10·4	23·7	54·8	141	0·51	0·88	1·41	3·15	6·90	15·8	36·5	94·0
300	0·82	1·50	2·40	5·37	11·8	26·9	62·3	160	0·55	1·00	1·60	3·58	7·90	17·9	41·5	107
350	0·97	1·65	2·64	5·88	12·9	29·4	68·0	177	0·65	1·10	1·76	3·92	8·60	19·6	45·3	118
400	1·06	1·77	2·83	6·32	13·9	31·6	73·2	195	0·71	1·18	1·89	4·21	9·30	21·0	48·7	130
500	1·21	1·97	3·16	7·07	15·6	35·4	82·1	217	0·81	1·32	2·11	4·71	10·4	23·6	54·7	145
600	1·33	2·17	3·46	7·73	17·0	38·8	89·7	234	0·89	1·44	2·31	5·15	11·3	25·8	59·7	156
800	1·52	2·49	3·98	8·90	19·6	44·5	103	265	1·02	1·66	2·66	5·93	13·1	29·7	68·6	177
1000	1·66	2·76	4·42	9·90	21·8	49·5	115	287	1·11	1·84	2·95	6·60	14·5	33·0	76·7	191
1200	1·82	3·00	4·81	10·7	23·6	53·8	125	322	1·21	2·00	3·21	7·15	15·8	35·9	83·3	214
1400	1·96	3·22	5·14	11·5	25·2	57·4	133	350	1·31	2·15	3·43	7·63	16·8	38·3	88·6	233
1600	2·10	3·48	5·46	12·2	26·8	61·0	141	368	1·40	2·31	3·64	8·13	17·9	40·7	94·0	245
1800	2·25	3·70	5·77	12·9	28·4	64·5	149	—	1·50	2·50	3·85	8·60	18·9	43·0	99·3	—
2000	2·41	3·96	6·05	13·7	30·0	68·0	—	—	1·61	2·64	4·08	9·10	19·9	45·5	—	—
2400	2·72	4·42	6·69	15·2	33·4	75·3	—	—	1·81	2·96	4·50	10·1	22·0	50·2	—	—
3000	3·17	5·16	7·61	17·5	38·3	—	—	—	2·11	3·44	5·12	11·6	25·1	—	—	—
3600	3·66	5·88	8·54	19·8	—	—	—	—	2·44	3·92	5·75	13·0	—	—	—	—



TYPE HH



TYPE HF



TYPE FF

DIMENSIONS

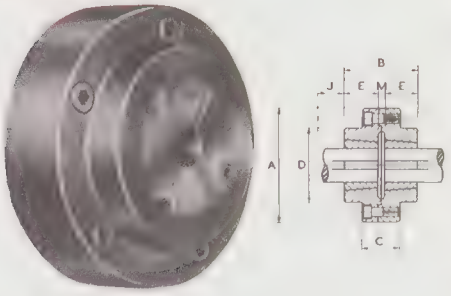
Size	Bush No.	Max Bore Ins.	A	B	C	D	E	H	J*
2⅜	1108	1⅛	2⅜	2 5/16	2 5/16	—	⅞	2	1⅛
3¼	1210	1¼	3¼	2⅜	2⅜	—	1	2½	1½
4	1310	1⅜	4	2⅜	1½	2⅜	1	3	1½
5¼	1610	1⅝	5¼	2½	2⅛	3¼	1	4	1½
7	2012	2	7	3⅜	2⅜	4⅜	1¼	5⅝	1⅝
8	2517	2½	8	4⅜	3⅛	4⅜	1¾	6⅜	1⅞
10	3020	3	10	5½	4¼	6	2	7½	2⅛
12½	3535	3½	12½	9	5¼	7	3½	9¼	2⅝

J* = Wrench clearance to allow for tightening and loosening the bush on the shaft.
The use of a shortened wrench will permit this dimension to be reduced.

N† = Shaft ends, although normally located dimension M apart, can project beyond the flanges as shown. In this event, allow sufficient space between shaft ends for end float and misalignment.

FENNER TAPER-LOCK® RIGID COUPLING

L1520



COUPLING DIMENSIONS (inches)

Coupling Size	Bush Size	Bush Data: Maximum Bore Normal Serv. in.	Bush Data: Maximum Bore Normal Serv. mm.	Bush Data: Maximum Bore Severe Serv. in.	Bush Data: Maximum Bore Severe Serv. mm.	A	B	C	D	E	J*	M†
R12	1215	1¼	32	1	25	4⅛	3¼	1⅜	2⅞	1½	1½	¼
R16	1615	1⅝	42	1 3/16	32	5	3¼	1⅝	3¼	1½	1½	¼
R25	2517	2½	60	2	50	7	3¾	2	5	1¾	1⅞	¼
R30	3030	3	75	2½	65	8½	6¼	2½	5¾	3	2⅛	¼
R35	3535	3½	90	2¾	70	9¾	7¼	2⅞	7	3½	2⅝	¼
R40	4040	4	100	3¼	80	11¼	8¼	3	8½	4	3⅛	¼
R45	4545	4½	110	3¾	95	13	9¼	3⅜	9½	4½	3½	¼
R50	5050	5	125	4	100	14¼	10¼	3⅝	10½	5	3⅝	¼

*J is the wrench clearance to allow for tightening and loosening the bush on the shaft. The use of a shortened wrench will permit this dimension to be reduced.

†M is the distance between shaft ends.

TAPER-LOCK Rigid Couplings provide a convenient means for rigidly connecting the ends of shafts. The TAPER-LOCK bushes permit the easiest and quickest fastening to the shaft with the firmness of a shrunk-on fit. These couplings have a male and female joint and are machined all over.

The male flange can be bored from the hub side (type H) or from the flange side (type F) and the female flange is type F. This gives two possible coupling assemblies, type HF and type FF.

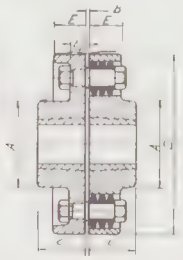
When connecting horizontal shafts, the most convenient assembly should be chosen. When connecting vertical shafts, use type FF only.

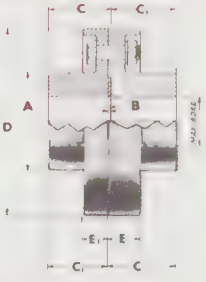
Normal service includes all normal loads that may be transmitted by mild steel shafting. Severe Service includes either heavy shock loads or the use of shafting in special steel. Consult Fenner where reversing torque loadings are concerned.

TYPE GCB COUPLINGS

TAPER-LOCK® "CONE-RING"

L1521





PRINCIPAL DIMENSIONS (inches)

Size	GCB 125	GCB 162	GCB 250	GCB 300	GCB 350	GCB 400	GCB 450	GCB 500
A	3·0	3·2	4·75	6	7·75	8·50	10·0	11·0
B	0·125	0·125	0·125	0·125	0·125	0·125	0·125	0·125
C	1·5	1·5	2·5	3·0	3·5	4·0	4·5	5·0
D	5·75	6·75	8·50	11·0	13·0	14·60	16·50	18·0
E	1·0	1·3	1·3	2·2	2·2	3·0	3·0	3·0
E_2	0·5	0·7	0·7	1·2	1·2	1·8	1·8	1·8
F	1·1	1·8	0·8	2·3	1·8	3·1	2·5	2·1
Min. Bore	½	½	⅞	1½	1½	1⅞	2½	2½
Max. Bore	1¼	1⅝	2½	3	3½	4	4½	5
H.P. per 100 r.p.m.	1·5	3·47	11·5	37·9	57·0	95·0	130	170
Torque Capacity lb. ins. (units of 1000)	0·945	2·19	7·250	24·00	36·00	60·00	82·00	107·0
Max. r.p.m. C.I. Body	4000	3400	2700	2090	1760	1570	1390	1270
Taper-Lock Bush No.	1215	1615	2525	3030	3535	4040	4545	5050

NOTE: Spare Parts—Pin half/1, Bush half/2, Pins and Nuts/3, Cone Rings/4

TYPE GR RIGID COUPLINGS

L1522

PRINCIPAL DIMENSIONS (inches)

Size	GR 075	GR 100	GR 125	GR 150	GR 175	GR 200	GR 237	GR 275	GR 325	GR 375	GR 425	GR 487	GR 550	GR 625	GR 712	GR 800	GR 900	GR 1000
A	1·3	2·0	2·5	2·75	3·25	3·8	4·6	5·0	5·8	7·0	8·0	9·0	10·0	11·5	13·0	14·5	16·0	18·0
B	0·125	0·125	0·125	0·125	0·125	0·125	0·125	0·187	0·187	0·187	0·25	0·25	0·25	0·25	0·25	0·25	0·25	0·25
C	1·3	1·6	1·9	2·2	2·4	2·7	3·0	3·5	4·0	4·6	5·2	5·8	6·5	7·4	8·3	9·3	10·4	11·5
C_1	1·17	1·47	1·77	2·07	2·27	2·57	2·87	3·31	3·81	4·41	4·95	5·55	6·25	7·15	8·05	9·05	10·15	11·25
D	3·50	5·00	5·20	5·75	6·75	7·60	8·50	10·0	11·0	13·0	14·6	16·5	18·0	21·0	23·5	26·0	29·0	32·5
E	0·9	1·0	1·0	1·0	1·3	1·3	1·3	2·2	2·2	2·2	3·0	3·0	3·0	4·0	4·0	4·0	5·5	5·5
E_1	0·77	0·87	0·87	0·87	1·17	1·17	1·17	2·01	2·01	2·01	2·75	2·75	2·75	3·75	3·75	3·75	5·25	5·25
Stock Bore	3/32	5/32	1/32	1/32	1/16	1/16	1/16	1 7/16	1 7/16	1 13/16	1 13/16	1 13/16	2½	Sizes to customer requirements				
Max. Bore	¼	1	1¼	1½	1¾	2	2⅜	2¾	3¼	3½	4¼	4⅞	5½	6½	7⅞	8	9	10
Max.r.p.m.	6500	4580	4450	4000	3400	3020	2700	2300	2090	1760	1570	1390	1270	1090	975	880	790	705

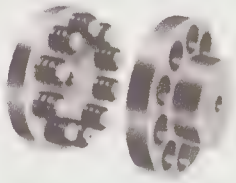
TYPE GC COUPLINGS

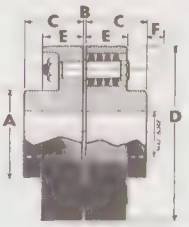
STANDARD TYPE "CONE-RING"

L1523

Note: It is usual practice to fit the driving shaft with the pin half of the "Cone-Ring" coupling, whilst the bush half is fitted to the driven shaft.

Australian Patent No. 25022





SRDB

PRINCIPAL DIMENSIONS

DIMENSIONS INCHES

Size	GC ¾	GC 1	GC 1¼	GC 1½	GC 1¾	GC 2	GC 2⅜	GC 2¾	GC 3¼	GC 3¾	GC 4¼	GC 4⅞	GC 5½	GC 6¼	GC 7⅛	GC 8	GC 9	GC 10	GC 12	GC 14
A	1·3	2·0	2·5	2·75	3·20	3·8	4·6	5·0	5·8	7·0	8·0	9·0	10·0	11·5	13·0	14·5	16·0	18·0	21·5	25·0
B	0·125	0·125	0·125	0·125	0·125	0·125	0·125	0·125	0·125	0·125	0·25	0·25	0·25	0·25	0·25	0·25	0·25	0·25	0·375	0·375
C	1·3	1·6	1·9	2·2	2·4	2·7	3	3·5	4	4·6	5·2	5·8	6·5	7·4	8·3	9·3	10·4	11·5	14	16
D	3·5	5·0	5·2	5·75	6·75	7·6	8·5	10·0	11·0	13·0	14·6	16·5	18·0	21·0	23·5	26·0	29·0	32·5	38·5	45·0
E	0·9	1·0	1·0	1·0	1·3	1·3	1·3	2·2	2·2	2·2	3·0	3·0	3·0	4·0	4·0	4·0	5·5	5·5	7·25	7·25
F	0·9	1·0	0·7	0·4	0·9	0·6	0·3	1·8	1·3	0·7	1·9	1·3	0·6	1·7	0·8	0·1	1·7	0·6	1·7	0·0
Stock Bore	⅓	⅓	½	½	⅝	⅝	⅝	1	1	1	1	1	1	1	1	Sizes to customer requirements.				
Max. Bore	¾	1	1¼	1½	1¾	2	2⅜	2¾	3¼	3¾	4¼	4⅞	5½	6¼	7⅛	8	9	10	12	14
H.P. per 100 r.p.m.	0·59	1·25	2·0	3·0	5·2	8·1	11·5	27·6	37·9	57·0	95·0	130	170	263	368	477	805	1065	1900	2700
Torque Capacity lb. ins. (units of 1000)	0·372	0·790	1·260	1·890	3·280	5·100	7·250	17·40	24·00	36·00	60·00	82·00	107·0	165·0	232·0	300·0	506·0	670·0	1179	1701
Max. r.p.m. C.I. Body	6550	4580	4420	4000	3400	3020	2700	2300	2090	1760	1570	1390	1270	1090	975	880	790	705	600	500

NOTE: Spare Parts—Pin half/1 Bush half/2 Pins and Nuts/3 Cone Rings/4

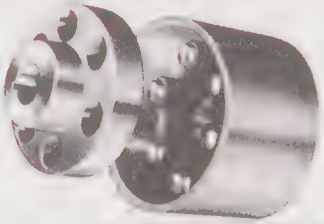
TYPE GCD COUPLINGS

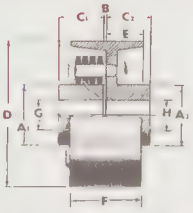
BRAKE DRUM TYPE "CONE-RING"

L1524

Note: The brake drum half should be fitted to the driven machine and as near as possible to it.

Australian Patent No. 25022





SRDB

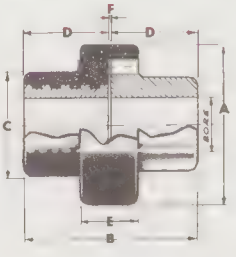
PRINCIPAL DIMENSIONS

Type GCD Size	4*	5½	6	6½	7	8	9	10	12	14	15	16/3¼	16/3½	18/3½	18/3¾	18/4¼	20/3¾	20/4½	20/4⅝	21/4½	21/4⅞	21/5½	24/4¼	24/4⅝	24/5½
A_1		2·50	2·50	2·75	2·75	3·20	3·8	4·6	5·0	5·8	5·8	5·8	7·0	5·8	7·0	8·0	7·0	8·0	9·0	8·0	9·0	10·0	8·0	9·0	10·0
A_2	2·00	2·63	2·75	3·25	3·25	3·50	4·0	4·88	5·63	5·80	5·80	6·13	8·0	6·13	8·0	8·50	8·0	8·50	10·0	8·5	10·0	11·5	8·5	10·0	11·5
B	⅛	⅛	⅛	⅛	⅛	⅛	⅛	⅛	¼	¼	⅛	⅛	⅛	⅛	⅛	¼	⅛	¼	¼	¼	¼	¼	¼	¼	¼
C1	1·38	1·9	1·9	2·2	2·4	2·4	2·7	3·0	3·5	4·0	4·0	4·0	4·6	4·0	4·6	5·2	4·6	5·2	5·8	5·2	5·8	6·5	5·2	5·8	6·5
C_2	1·38	1·9	2·2	2·4	2·4	2·5	2·7	3·0	4·0	4·0	4·0	4·6	5·2	4·6	5·2	5·8	5·2	5·8	6·5	5·8	6·5	7·4	5·8	6·5	7·4
D	4	5½	6	6½	7	8	9	10	12	14	15	16	16	18	18	18	20	20	20	21	21	21	24	24	24
E	1⅜	1⅜	1⅜	1⅜	1⅜	1¼	2	2⅛	2⅜	2⅜	2⅜	2⅜	2⅜	3⅛	3⅛	3⅛	3½	3½	3½	3½	3½	3½	3¾	3¾	3¾
F	2⅜	3¼	3½	3¼	3½	3½	4	4¼	4⅜	5½	5½	5⅜	5⅜	6⅛	6⅛	6¼	7	7	7	7	7	7	7⅛	7⅛	7⅛
G	1	1¼	1¼	1½	1½	1½	2	2⅜	2½	3½	3¼	3¼	3¼	3¼	3⅜	4¼	3¾	4⅛	4⅞	4½	4⅜	5⅛	4¼	4⅞	5½
H	1⅛	1¼	1⅜	1½	1¾	1⅞	2	2½	3	3¼	3¼	3½	4¼	3½	4¼	4½	4¼	4½	5½	4½	5½	6¼	4½	5½	6¼
Stock Bore	⅓	½	½	½	½	½	⅝	⅝	1	1	Sizes to customer requirements.														
H.P. per 100 r.p.m.	0·45	1·90	2·00	3·00	3·00	5·20	8·10	5·75	13·8	18·9	18·9	18·9	28·5	18·9	28·5	47·5	28·5	47·5	65·0	47·5	65·0	85·0	47·5	65·0	85·0
Torque Cap. lb. ins. (units of 1000)	·284	1·20	1·26	1·89	1·89	3·28	5·10	3·62	8·68	11·90	11·90	11·90	17·95	11·90	17·95	29·90	17·95	29·90	40·80	29·90	40·80	53·50	29·90	40·80	53·50
Max. r.p.m. C.I. Body	5750	4170	3830	3400	3280	2870	2550	2300	1910	1640	1530	1440	1440	1270	1270	1270	1150	1150	1150	1090	1090	1090	960	960	960

NOTE: Couplings GCD10 to GCD24/5½ may have H.P. rating and number of pins doubled, by special order if required.

COUPLINGS "GEARTEX"

L1525 TYPE GT



PRINCIPAL DIMENSIONS

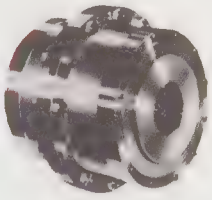
Size	GT 1	GT 2	GT 3	GT 4
A	2 9/16	3 9/16	4⅛	5½
B	2 5/16	3 5/16	4 5/16	6⅛
C	1¾	2¼	3⅛	4¼
D	1⅛	1½	2¼	3
E	9/16	1 1/16	1⅛	1⅝
F	1/16	1/16	1/16	⅛
Max. Bore	¾	1⅛	1½	2
Min. Bore	⅜	½	⅝	1

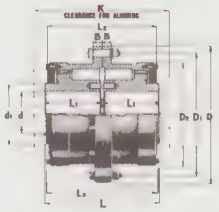
H.P. RATINGS

R.P.M.	GT 1	GT 2	GT 3	GT 4
100	0·5	2·0	3·0	6·0
250	0·7	3·0	5·0	10
500	1·0	5·0	7·0	14
750	1·2	6·0	9·0	16
1000	1·5	7·0	10	18
1500	1·8	8·0	12	21
3000	2·5	9·0	15	27

GEARFLEX COUPLING
DOUBLE ENGAGEMENT TYPE GD

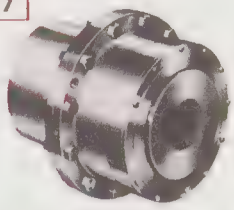
L1526

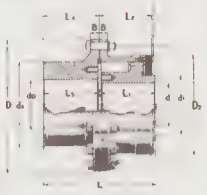




GEARFLEX COUPLING
SINGLE ENGAGEMENT TYPE GSA

L1527





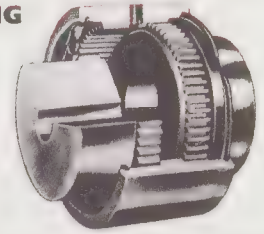
Primarily designed for use with floating shafts.

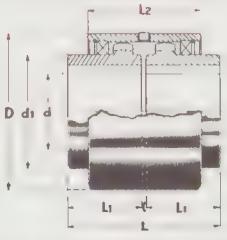
COUPLING MISALIGNMENT. Angular Misalignment only (no Parallel) max.1° 15'.

Size	GD 1½	GD 2	GD 2½	GD 3	GD 3½	GD 4	GD 4½	GD 5½	GD 6½	GD 7½	GD 8½	GD 9¾	GD 11	GD 13	GD 15	GD 17½	GD 20
Size	GSA 1½	GSA 2	GSA 2½	GSA 3	GSA 3½	GSA 4	GSA 4½	GSA 5½	GSA 6½	GSA 7½	GSA 8½	GSA 9¾	GSA 11	GSA 13	GSA 15	GSA 17½	GSA 20
Flex. Half Max. Bore (d)	1½	2	2½	3	3½	4	4½	5¼	6¼	7¼	8½	9¾	11	13	15	17½	20
Rigid Half Max. Bore (do)	2	2½	3¼	3¾	4½	5	5½	6⅛	7¼	8⅛	9½	10¾	12	14	16	18½	21
H.P. per 100 r.p.m.	10.5	24.8	47.5	86	133	190	285	400	525	820	1200	1680	2300	3620	6000	8500	11400
Torque Capacity lb. ft. x 100	5.5	13	25	45	70	100	150	210	275	430	630	880	1200	1900	3150	4500	6000
Max. r.p.m.	7000	5500	4500	3800	3200	2750	2400	2100	1950	1600	1450	1300	1200	1000	840	700	640
d1	2¼	2⅞	3⅜	4¼	5	5⅝	6½	7½	8¾	10¼	12	13¾	15¼	18	21	24½	28
d3	3¼	4	5½	6	7⅛	8	8¾	9¾	11¼	12⅝	14½	16½	18	21	24	28	31½
D	5½	6⅞	■	9⅛	10⅜	11¾	13¼	14¾	16½	18⅜	22	24¼	26½	30	36	40	44¼
D1	4¾	5⅞	7	8⅛	9⅜	10½	11¾	13¼	14¾	16⅞	20	22¼	24	27 7/16	33	37	41¼
D2	3 1/16	4⅞	6	7 1/16	8 1/16	9 1/16	10 1/16	11¼	12⅝	15 1/16	17⅞	20⅛	21½	25	30⅛	34⅛	38⅜
C	⅛	⅛	1/4	1/4	1/4	1/4	1/4	3/8	3/8	3/8	3/8	3/8	½	½	¾	¾	¾
C1	3/16	3/16	1/4	1/4	1/4	5/16	5/16	3/8	3/8	3/8	7/16	7/16	9/16	9/16	¾	¾	¾
L	4⅜	5⅜	6½	8	9¼	9¾	11	12⅜	13¾	15⅜	17⅜	19¼	21½	25½	28½	33½	37¾
L1	2⅛	2⅝	3¼	3⅞	4½	4¾	5⅜	6⅛	6¾	7½	8½	9½	10½	12½	14	16½	18½
L3	2 9/32	2 11/16	3 5/16	3 15/16	4 17/32	4 23/32	5 13/32	6 7/32	6¾	7⅝	8 17/32	9 23/32	10 11/16	12 9/16	14⅛	16 13/32	18⅜
L4	2 3/16	2 11/16	3⅜	4	4⅝	4⅞	5½	6 5/16	6 13/16	7 11/16	8 11/16	9 15/16	10⅜	12⅜	14⅜	16⅞	18⅞
B	½	⅜	⅜	⅜	¾	¾	⅞	⅞	1	1	1¼	1¼	1⅜	1⅜	1¾	1¾	2
Coupling Bolt Diam.	⅜	½	½	½	⅝	⅝	¾	¾	⅞	⅞	1	1	1¼	1¼	1½	1½	1½
Coupling Bolts No. Off.	6	6	8	■	8	10	10	12	10	12	12	14	14	16	18	20	22
*Keyway (w x h)	⅜ x ⅛	½ x 5/32	⅝ x 7/32	¾ x ¼	⅞ x 5/16	1 x ⅜	1¼ x 7/16	1¼ x 7/16	1½ x ½	1¾ x ⅝	2¼ x ¾	2½ x 13/16	2¾ x 15/16	3¼ x 1 1/16	3¾ x 1¼	4¼ x 1½	5 x 1 11/16
Stock Bore	1 17/32	1 13/16	1 13/16	1 7/16	1 7/16	1 13/16	1 13/16	2½	3⅞	4⅞	5⅞	—	—	—	—	—	—
Max. Parallel Misalignt. (a)	3/64	1/16	3/32	7/64	9/64	9/64	3/32	3/16	13/64	15/64	17/64	5/16	11/32	13/32	13/32	17/32	⅝

GEARFLEX COUPLING
SAFETY SLEEVE TYPE
TYPE GSS

L1528



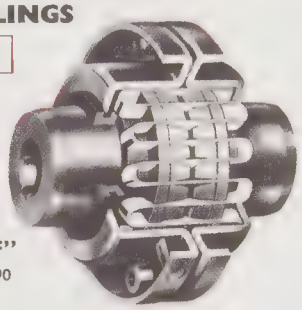


Size	Max. Bore	H.P. per 100 r.p.m.	Max. Speed r.p.m.	Weight (Max. Bore) lb.	d1	D	C	L	L1	L2	Stock Bore (d)
GSS 1	1	1.85	7,500	1 1/16	1½	2.48	⅛	2⅜	1⅛	2¼	½
GSS 1½	1½	6.30	6,000	4½	2⅜	3.54	⅛	3⅛	1½	2 11/16	½
GSS 2	2	13.30	5,500	8	3	4.18	⅛	4⅛	2	3	1
GSS 2½	2½	26.30	5,300	14	3¾	5.20	3/16	5 3/16	2½	3⅜	1

DIMENSIONS INCHES

FALK STEELFLEX COUPLINGS

L1529



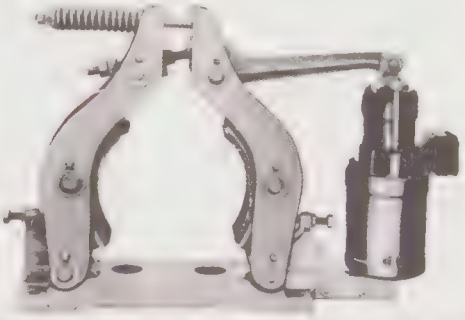
TYPE "F"
Sizes 3 to 190

Bore Range ⅜"-1 1/16" to 4"-8"
The Type "F" couplings are intended for all general applications and will operate in either a horizontal or vertical position.

'JK' TYPE INDUSTRIAL BRAKES THRUSTOR OPERATED

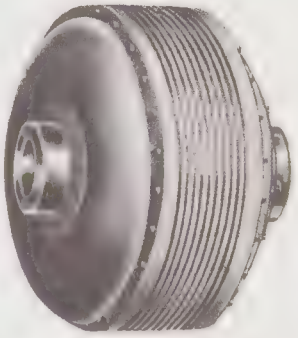
L1530

for Momentum Arresting
or Holding Brake Applications
Brake Drum Sizes — 8″, 10″, 12″, 16″, 20″, 24″



SCHROEDER & HOLLAND FLUID COUPLINGS

L1531



Single Rotor Type No. 6 to 21
6″ diameter to 21″ diameter
for ¼ HP to 120 HP.

Double Rotor Type
No. 13 x 2 to 54 x 2
13″ diameter to 54″ diameter
for 5 HP to 500 HP

Attachments Available —
V-belt Pulley, Cone Ring Adaptor, Rigid Output Adaptor, Rigid or Cone Ring Brake Drum.

L1532

THE NUTTALL "400" FRICTION CLUTCH

CLUTCH SELECTION TABLE

DIMENSIONS INCHES

Size of Nuttall Clutch	Largest Bore Ins.	Approximate Weight Lbs.	Horsepower Transmitted at R.P.M.								Working Torque ft. lbs.
			50	100	200	300	500	800	1000	1500	
406	1¼	15	½	¾	1½	2	3	5	7	10	40
407	1½	25	¾	1½	3	4	6	8	10	12	80
409	2	36	1½	3	6	9	12	16	18	20	160
411	2½	68	3	6	12	18	24	30	34	36	320
412*	2½	84	6	12	24	36	45	55	60		630
414	3½	96	6	12	24	36	48	58	64		630
415*	3½	118	12	24	48	70	90	100			1260

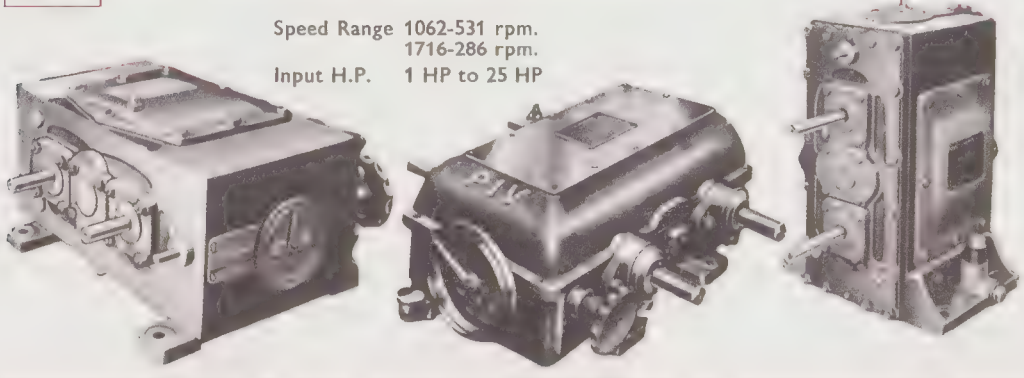
* Double Disc Type.

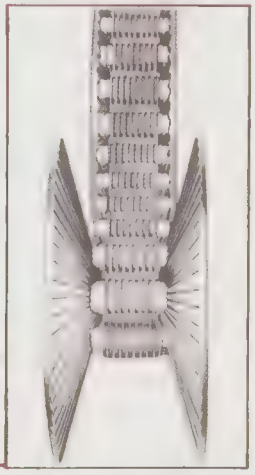
P.I.V. POSITIVE INFINITELY VARIABLE CHAIN GEAR

L1533

THE 'NO-SLIP' GEAR FOR VARIABLE SPEED DRIVES

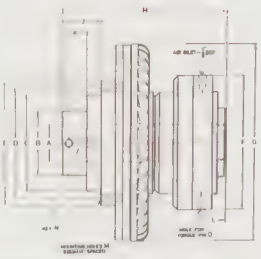
Speed Range 1062-531 rpm.
1716-286 rpm.
Input H.P. 1 HP to 25 HP

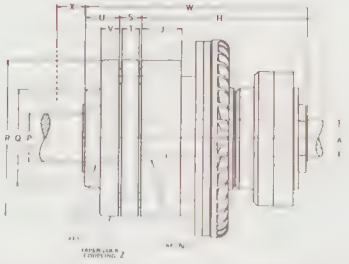




CLUTCHES AND CLUTCH-BRAKES

L1534 "AIR CHAMP" CLUTCHES





The torque may be calculated from the following formula. Torque in inch lbs. =

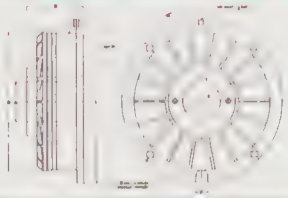
$$\frac{\text{HORSEPOWER} \times 63000}{\text{R.P.M. OF CLUTCH SHAFT}}$$

GENERAL DIMENSIONS

Model	Max. Torque in. lbs.	A Max. Bore	F	G	H	L	M	P Max. Bore	Q	R	S	T	U	V	W
FW	up to 130 in. lbs.	.875	3½	4⅜	4¾	–	4 – ¼ BSW	1⅛	–	2⅜	9/16	7/16	7/8	–	5⅛
LW	up to 400 in. lbs.	1.125	3⅞	6	5 9/16	–	4 – ¼ BSW	1¼	2⅜	4	⅜	½	1½	9/16	7 11/16
MW	up to 900 in. lbs.	1.625	5⅜	8⅛	7 3/16	–	4 – 5/16 BSW	2½	5	7	⅞	⅝	1¾	⅞	9 13/16
HW	up to 3600 in. lbs.	1.875	6⅞	10⅛	8½	1 3/16	4 – ⅜ BSW	3	5	8	1⅛	⅞	1¾	13/16	11⅛
XHW	up to 5600 in. lbs.	2.375	8½	11⅛	10¼	.594	6 – ⅜ BSW	3	6	10	1½	1¼	3	1 3/16	14¾

Tolerance on bore: + .0015" / + .0005"

L1535 "AIR CHAMP" BRAKES



Model	Max. Torque in. lbs.	A Bore Max.	B	C	D	E	F	G
FWB	up to 550 in. lbs.	1⅛	4⅜	5⅞	2½	5 5/16	⅜	9/32
LWB	up to 110 in. lbs.	1⅜	6⅛	7¼	3⅛	6½	⅜	11/32
MWB	up to 2400 in. lbs.	1⅞	8⅛	9	3⅞	8⅜	¾	13/32
HWB	up to 4300 in. lbs.	2⅞	10⅛	12	4¼	11	⅞	17/32

Tolerance on bore: + .0015" / + .0005"

Brakes are supplied with maximum bore as standard. For bore sizes smaller than standard a full range of adaptor bushes is available ex stock.

L1537 FRACTIONAL H.P. CLUTCH/BRAKE

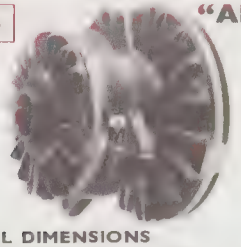
Model	Outside Diam.	Pilot Diam.	Bore	Length Overall
BW Clutch Integral Pulley Model	2¾	–	.625	3½
BW Pilot Mount Model	2¾	2.125	.625	3½

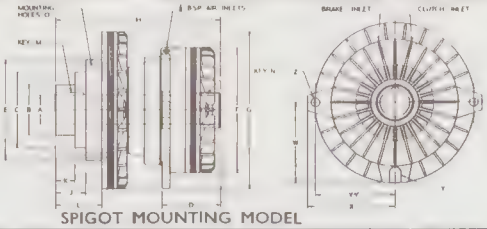
Tolerance on Bore: + .001" – .000"
Tolerance on Pilot: + .000" – .0015"

Capacity: up to 60 in. lbs. torque
Max. Speed: 3600 rpm.

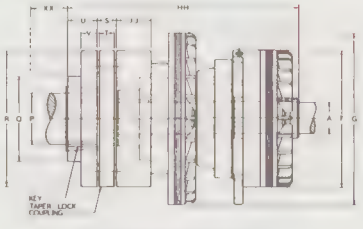
M-Section vee-belts are an auxiliary series suitable for fractional horse power drives. Size of vee-belt cross-section ⅜" wide x ¼" deep.

L1536 "AIR CHAMP" CLUTCH-BRAKE COMBINATION RANGE





SPIGOT MOUNTING MODEL



COUPLING ADAPTOR TYPE

GENERAL DIMENSIONS

Model	A Max. Bore	B	C	D	E	F	G	H	O- Mounting Holes	P Max. Bore	Q	R	S	W	X	Y	Z	HH
LWCB	1	1⅛	3	2¼	4¼	4⅜	6	6 3/16	4 – ¼ BSW on 3½ PCD	1¼	2⅜	4	⅜	3	3¼	⅜	13/32	8 5/16
MWCB	1½	2⅜	4	3	5½	6	8⅛	7⅞	4 – 5/16 BSW on 4¾ PCD	2½	5	7	⅞	4 1/16	4 1/16	⅜	13/32	10½
HWCB	1⅞	3¼	4⅞	3 13/16	6⅜	8	10	10 7/16	4 – ⅜ BSW on 5⅜ PCD	3	5	8	1⅛	5	5½	⅞	½	13 5/16

DIMENSIONS INCHES

COUPLING ADAPTOR TYPE

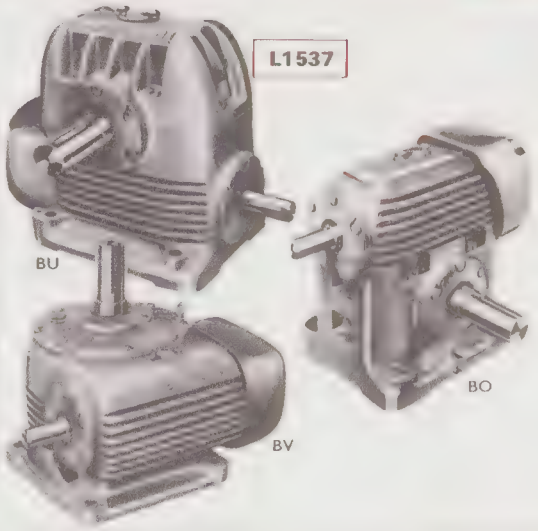
Tolerance on Bore A: + .0015 / – .00
Tolerance of Spigot C: + .00 / – .001

Keyways: Depth of both keyways on shaft to be milled to suit key "M".

RADICON SPEED REDUCERS RATINGS

FACTORS

Prime Mover	Duration of Service	Nature of Load on Gear Unit from Driven Machine		
		Uniform	Moderate Shock	Heavy Shock
Electric motor or steam turbine	2 hours/day	.75	.9	1.25
	4 ,,	.8	1.0	1.3
	8 ,,	.9	1.1	1.45
	12 ,,	1.00	1.25	1.55
	24 ,,	1.25	1.5	1.75
Multi-cylinder internal combustion engine	2 hours/day	.9	1.1	1.25
	4 ,,	1.0	1.25	1.4
	8 ,,	1.1	1.35	1.6
	12 ,,	1 25	1.5	1.75
	24 ,,	1.5	1.75	2.0
Single cylinder internal combustion engine	2 hours/day	1.1	1.35	1.75
	4 ,,	1.25	1.5	1.85
	8 ,,	1.35	1.65	1.95
	12 ,,	1.5	1.75	2.05
	24 ,,	1.75	2.0	2.25



RATING TABLE — Torque . . Output Torque 100 lb. in.

Nominal Ratio	Capacity Input H.P. Output lb. in.	Nominal Output Speed r.p.m.	Based on Input Speeds of 1500 r.p.m.								Nominal Output Speed r.p.m.	Based on Input Speeds of 1000 r.p.m.							
			Size of Unit									Size of Unit							
			400	500	600	700	800	10	12	14		400	500	600	700	800	10	12	14
5/1	Input H.P.	300	16.8	27.0	45.0	60.0	79.0	89	115	140	200	13.0	22.0	32.3	43.5	58.0	63.8	89	106
	Torque		3220	5400	8700	11870	15900	17500	22600	27500		3710	6550	9400	13000	17400	18700	26000	31000
7.5/1	Input H.P.	200	11.5	21.5	31.0	48.0	66.0	86	109	138	133.3	9.0	17.0	24.8	35.0	47.5	60.5	84	100
	Torque		3350	6270	9220	14200	19700	25200	32500	41500		3880	7350	11100	15500	21000	26500	37000	45000
10/1	Input H.P.	150	10.0	19.1	27.0	37.0	48.0	76	104	139	100	8.0	14.8	20.8	28.8	38.5	54.5	78	104
	Torque		3680	7250	10100	14000	18500	30500	40500	54000		4270	8320	11800	16400	22000	32500	45000	60000
12.5/1	Input H.P.	120	8.0	14.8	23.5	35.0	48.0	66	96	123	80	6.3	11.4	18.1	24.8	34.4	48.5	70	90
	Torque		3820	7000	11400	17000	23400	32800	46000	59300		4500	8100	13300	18000	25400	36000	50000	64000
15/1	Input H.P.	100	7.2	12.3	21.8	29.9	40.0	62.5	85	114	66.7	5.7	9.5	16.2	22.8	30.7	45	63.5	84
	Torque		3830	6600	12000	16500	22200	35200	48000	65400		4430	7650	13350	19000	25700	38000	53500	71500
20/1	Input H.P.	75	6.2	11.2	17.2	22.9	30.4	47	67.5	94.5	50	4.8	8.7	12.6	17.3	23.4	36.2	51	69.5
	Torque		4300	7950	12600	16300	22200	36000	50700	71500		4870	9000	14000	18300	25500	40500	56500	78000
25/1	Input H.P.	60	5.1	9.6	13.5	21.4	28.1	41.5	58	82	40	4.0	6.7	10.4	15.8	21.1	31	43.5	60
	Torque		4260	7350	11550	18700	25400	39000	53000	75500		4850	8360	13200	20500	28000	43500	59000	82000
30/1	Input H.P.	50	4.5	8.0	12.3	17.2	22.7	35	50	71	33.3	3.6	6.2	9.3	12.6	17.6	26.5	37.5	50
	Torque		4430	8060	12700	17900	24000	37500	54500	80000		5050	9160	14200	19500	26900	42000	60500	84000
35/1	Input H.P.	42.9	4.2	7.1	10.9	15.0	18.3	30	42	62.5	28.6	3.3	5.4	8.2	11.4	13.9	22.2	31.5	47
	Torque		4640	8150	12750	17700	24400	36500	53600	79000		5380	9160	14200	20000	24900	40000	60000	88000
40/1	Input H.P.	37.5	3.8	6.3	10.2	15.1	19.0	28.5	40.5	56	25	3.0	4.9	7.8	11.2	14.5	21.3	30	41
	Torque		4780	7620	13300	19900	25700	39400	56000	79000		5470	9010	14900	21600	29200	43000	61000	86000
45/1	Input H.P.	33.3	3.3	5.7	10.1	13.2	17.2	24.5	35	49.5	22.2	2.6	4.5	7.5	10.0	13.1	18.7	25.8	36.5
	Torque		4590	8030	14400	18800	24940	37500	53200	77000		5220	8930	15750	21400	28400	42000	58000	84000
50/1	Input H.P.	30	2.9	5.1	8.4	13.3	16.4	22.5	32.7	46	20	2.3	4.1	6.7	10.2	12.8	17	24.5	32
	Torque		4250	7660	13000	21200	26700	37600	55000	78500		4840	8850	15000	23800	30600	42000	61000	81000
60/1	Input H.P.	25	2.5	4.4	7.0	10.3	14.0	20.2	29	40	16.7	2.0	3.4	5.4	8.3	10.9	15.3	21.4	29
	Torque		4210	7570	12550	18900	25860	39200	57200	80000		4760	8550	14000	22000	29400	43500	62000	86500
70/1	Input H.P.	21.4	2.2	3.8	6.0	8.8	11.9	15.3	23.5	35	14.3	1.7	3.0	4.7	7.0	9.2	11.6	17.2	25.4
	Torque		4200	7440	11950	18000	24440	33600	53300	79000		4700	8450	13600	20400	27340	37500	57000	84000

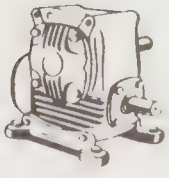
Ratings are based on a factor of 1, which is equivalent to 12 hours running per day. Refer to Factor Table for actual service factor according to nature of load and duration of service. Ratios and Output Speeds are nominal.

ADAPTABLE TYPE 'A' RADICON WORM REDUCERS

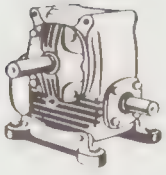
Each unit is packed with detached feet (either horizontal or vertical type, depending on the required position), and the necessary bolts. Oil level, breather and drain plugs are fitted in accordance with the required mounting position. It is important, therefore, that the mounting position reference be quoted when ordering.

Also of importance is the correct seating of the four locating pads under the feet of the unit, because of the possibility of distortion when the bolts are tightened. This could cause errors of alignment or even breakage. Hole clearances provide a degree of flexibility and permit accurate lining up before the bolts are finally tightened.

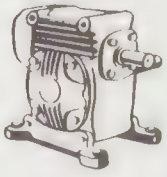
An instruction leaflet included with each container gives full details of feet assembly and lubrication.



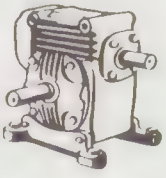
"1R"



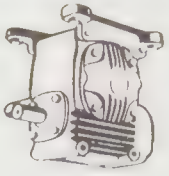
"1L"



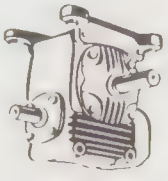
"2R"



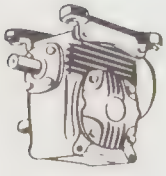
"2L"



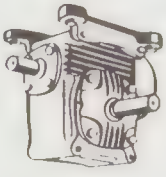
"3R"



"3L"



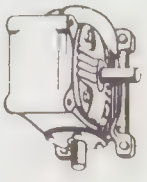
"4R"



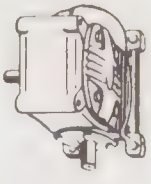
"4L"

"5R"

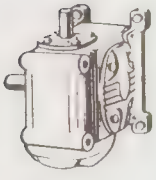
"5L"



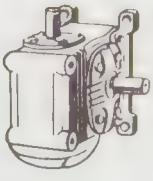
"6R"



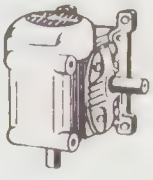
"6L"



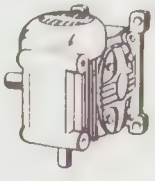
"7R"



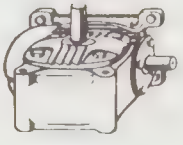
"7L"



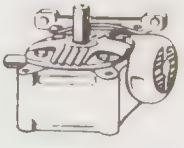
"8R"



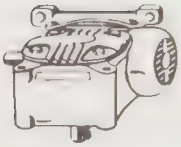
"8L"



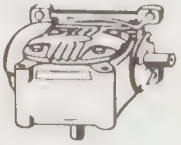
"9R"



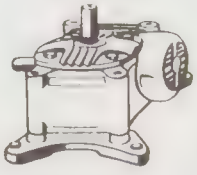
"9L"



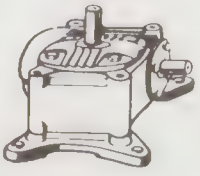
"10R"



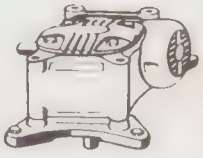
"10L"



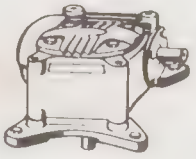
"11R"



"11L"



"12R"



"12L"

NORMAL HORSEPOWER RATINGS

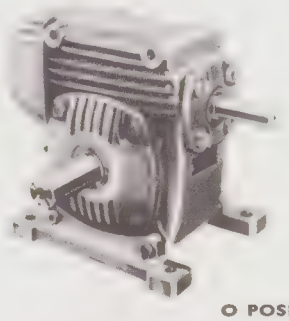
L1538 **ADAPTABLE TYPE 'A' RADICON WORM REDUCERS**

RATING TABLES Based on Input Speeds of 900 and 1,500 r.p.m.

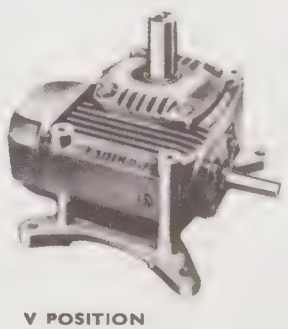
Ratio	Capacity	Output Speed r.p.m.	900 r.p.m. Sizes							Output Speed r.p.m.	1,500 r.p.m. Sizes						
			112	133	162	200	237	287	337		112	133	162	200	237	287	337
5 : 1	Input H.P.	180	.44	.68	.98	1.5	2.0	3.8	5.9	300	.58	.90	1.4	2.2	2.9	5.6	8.7
	Output Torque, lb. in.		134	209	301	436	620	1260	1830		109	170	254	383	539	1115	1620
	Overall Efficiency % ..		83	84	84	85	87	90	91		84	86	85	88	88	92	92
7.5 : 1	Input H.P.	120	.38	.57	.81	1.2	1.8	3.4	5.0	200	.52	.75	1.1	1.7	2.5	5.0	7.3
	Output Torque, lb. in.		157	231	339	520	770	1520	2240		129	189	284	459	666	1375	2020
	Overall Efficiency % ..		80	80	82	83	85	88	89		81	82	84	86	86	90	91
10 : 1	Input H.P.	90	.33	.46	.66	.99	1.5	2.8	4.1	150	.45	.63	.97	1.4	2.1	4.2	6.1
	Output Torque, lb. in.		182	256	379	572	855	1750	2450		153	217	340	500	741	1595	2220
	Overall Efficiency % ..		76	75	78	79	82	86	87		78	78	80	81	84	88	89
12.5 : 1	Input H.P.	72	.28	.43	.60	.91	1.2	2.4	4.0	120	.37	.60	.86	1.3	1.8	3.6	5.7
	Output Torque, lb. in.		178	281	395	614	853	1740	2950		146	242	354	536	749	1601	2670
	Overall Efficiency % ..		72	74	76	77	78	84	86		74	77	78	80	81	86	88
15 : 1	Input H.P.	60	.25	.39	.54	.90	1.2	2.2	3.2	100	.34	.52	.77	1.3	1.7	3.3	4.9
	Output Torque, lb. in.		180	290	409	693	955	1835	2760		152	242	357	610	830	1700	2520
	Overall Efficiency % ..		71	73	74	76	76	82	84		74	76	76	79	79	84	85
20 : 1	Input H.P.	45	.21	.31	.48	.64	.92	1.9	2.8	75	.28	.43	.67	.89	1.3	2.7	4.2
	Output Torque, lb. in.		182	274	473	594	889	2085	3110		152	246	400	521	771	1800	2820
	Overall Efficiency % ..		61	64	71	67	69	80	81		64	68	74	70	72	82	83
25 : 1	Input H.P.	36	.19	.29	.42	.59	.86	1.5	2.1	60	.26	.39	.58	.83	1.2	2.1	3.1
	Output Torque, lb. in.		193	305	456	649	990	1905	2740		163	263	396	572	870	1705	2460
	Overall Efficiency % ..		57	60	62	62	66	73	73		60	64	66	66	69	77	75
30 : 1	Input H.P.	30	.16	.26	.38	.57	.77	1.4	1.9	50	.21	.35	.53	.79	1.1	2.0	2.8
	Output Torque, lb. in.		180	311	476	728	1010	2050	2910		152	270	416	644	885	1850	2680
	Overall Efficiency % ..		54	57	59	61	63	71	72		57	61	62	65	66	74	75
40 : 1	Input H.P.	22.5	.13	.19	.34	.46	.69	1.2	1.8	37.5	.17	.26	.47	.69	.98	1.7	2.6
	Output Torque, lb. in.		163	285	502	732	1120	2280	3340		140	247	428	712	1005	1995	3100
	Overall Efficiency % ..		46	54	52	56	57	66	68		49	57	54	61	61	70	72
50 : 1	Input H.P.	18	.10	.15	.23	.44	.67	.98	1.6	30	.15	.21	.36	.60	.92	1.4	2.3
	Output Torque, lb. in.		164	260	412	808	1240	2160	3660		143	229	399	696	1100	1880	3300
	Overall Efficiency % ..		44	49	51	52	53	63	65		47	52	53	56	57	67	68
60 : 1	Input H.P.	15	.09	.14	.24	.36	.52	.83	1.5	25	.12	.19	.32	.51	.87	1.1	2.0
	Output Torque, lb. in.		151	262	451	716	1107	2010	3640		131	232	385	665	1180	1740	3180
	Overall Efficiency % ..		40	45	46	48	51	58	59		42	48	48	52	54	62	64
70 : 1	Input H.P.	12.86	.08	.09	.17	.27	.54	.78	1.3	21.43	.11	.16	.27	.45	.72	1.0	1.8
	Output Torque, lb. in.		147	198	386	605	1225	2100	3650		129	212	387	655	1040	1800	3150
	Overall Efficiency % ..		37	43	45	46	46	55	56		40	46	49	50	50	59	60

Tables based on a factor of 1.

U POSITION



O POSITION

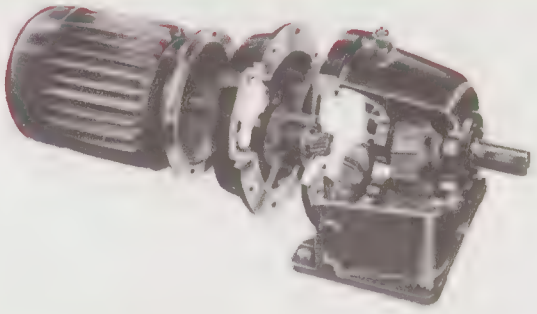


V POSITION

Aust. Design Reg. Pending Aust. Pat. App.

HELICON GEARED MOTORS

L1539 Mk. 4 Series 2



H.P.	Output R.P.M.	Size
¼ T.E.	525, 429, 351, 286, 234 191, 156, 127, 104, 85 69, 56, 46, 37, 30 25, 20, 16.7	 D122 D129 T226
½ T.E.	525, 429, 351, 286, 234 191, 156, 127, 104, 85 69, 56, 46, 37, 30 25, 20 16.7	 D122 D129 T226 T326
¾ T.E.F.C.	525, 429, 351, 286, 234 191, 156, 127, 104, 85, 69 56, 46, 37 30, 25, 20, 16.7	 D122 T226 T326
1 T.E.F.C.	525, 429, 351, 286 234, 191, 156, 127, 104 85, 69, 56, 46 37, 30, 25, 20 16.7	 D122 T226 T326 T431
1½ T.E.F.C.	525, 429, 351, 286 234, 191, 156 127, 104, 85 69 56, 46 37 30, 25 20, 16.7	 D122 D227 T226 D335 T326 T431 T535
2 T.E.F.C.	525, 429, 351, 286, 234 191, 156, 127, 104 85, 69, 56, 46 37, 30 25, 20 16.7	D122 D227 D335 T431 T535 T642
3 T.E.F.C.	525, 429, 351 286, 234, 191 156 127, 104, 85, 69 56 46, 37, 30 25, 20, 16.7	 D226 D326 D335 T431 T535 T642
4 T.E.F.C.	525, 429, 351, 286, 234 191, 156 127, 104 85 69, 56, 46, 37 30, 25 20, 16.7	D226 D326 D335 T431 T535 T642 T750
5½ T.E.F.C.	525, 429, 351 286, 234 191, 156, 127, 104 85, 69, 56 46, 37, 30 25, 20 16.7	D226 D326 D431 T535 T642 T750 T870
7½ T.E.F.C.	525, 429, 351, 286 234, 191, 156 127, 104 85 69, 56, 46 37, 30 25, 20, 16.7	 D431 D535 T535 T642 T750 T870
10 T.E.F.C.	525, 429, 351, 286, 234 191, 156, 127, 104 85, 69 56, 46, 37 30, 25, 20, 16.7	D431 D535 T642 T750 T870
15 T.E.F.C.	525, 429, 351 286, 234, 191 156, 127, 104 85 69 56, 46, 37, 30, 25	 D535 D642 T642 T750 T870
20 T.E F.C.	525, 429, 351 286, 234, 191, 156 127, 104, 85 69, 56, 46, 37	D535 D642 D750 T870

ROBLEY SPEED VARIATOR

L1541 **Provides Stepless and Noiseless Regulation for Vee Belt Drives**

Manufactured in three sizes for vee belt drives transmitting up to 5 h.p.

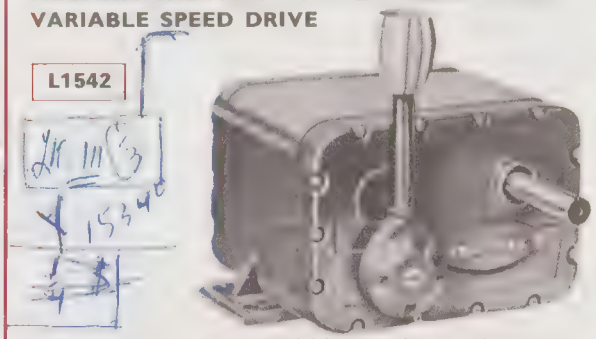
Horsepower specified in these tables is the approximate maximum output speed of the variator with input belt speed of 4600 ft. min. Power transmission figures for each application must be worked out using the standard tables for V belt drives.

Cat. No.	Belt Type	Ratio	Diam. of Variator Pulley	Approx. Max. H.P. Transmission	Weight of Variator
A. 14	A	4 : 1	5½″	2.0 h.p.	13¾ lbs.
B. 14	B	4 : 1	6¾″	4.0 h.p.	21½ lbs.
C. 13	C	3 : 1	6¾″	5.0 h.p.	22½ lbs.

ZERO-MAX®

MECHANICAL FRACTIONAL HORSEPOWER VARIABLE SPEED DRIVE

L1542



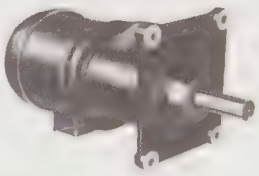
- takes a constant input speed and delivers stepless variable output speed
- goes to zero rpm so it can be used as a clutch
- allows fast speed change at any time, running or not
- gives positive drive with constant torque
- uses any power source or is available with motor
- torque ratings of 12 inch-pounds to 1000 inch-pounds
- speed ranges of 0.400 rpm down to 0.10 rpm with 1800 rpm input

C & H GEAR MOTORS

L1543 SENIOR RANGE

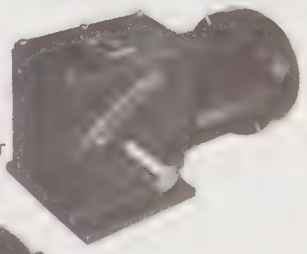
FOOT MOUNT

GIRDER MOUNT



MIXER MOUNT

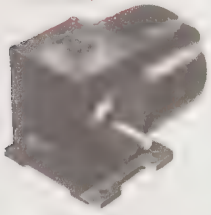
FLANGE MOUNT

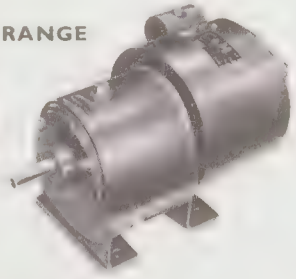


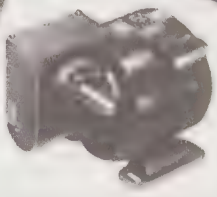
Three Phase Standard or Flameproof
Single Phase T.E.F.C.
Size 2 H.P. Ratings
Three Phase ¼, ½, ¾, 1, 1½, 2, 3, 5, 7½
Single Phase ¼, 1, 2
Type 3 ¾ or ½ h.p.
Type 4 ½ h.p.

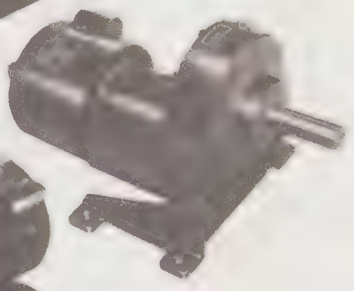
Speed Range
505 to 0.1 r.p.m.
2, 3 or 4 stage reduction
320 - 18 r.p.m
32 - 3.5 r.p.m.

L1544 JUNIOR RANGE







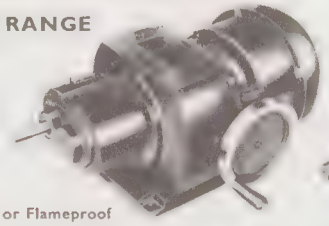


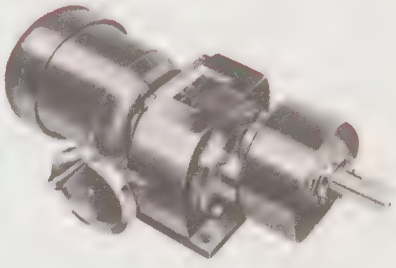
Three Phase Totally Enclosed Motor
Power Ratings ¼ h.p. Above 52 r.p.m.
300 lbs. inches below 52 r.p.m.

Speed Range
720 r.p.m. to .011 r.p.m.

C & H VARIABLE DRIVES

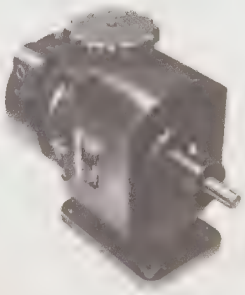
L1545 SENIOR RANGE

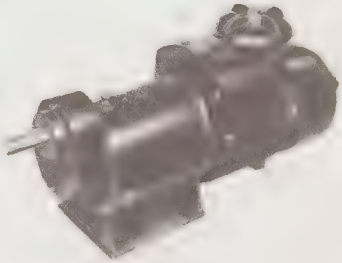




Three phase Standard or Flameproof
Single phase Capacator Start Motors
H.P. ratings ¼, 1, 2, 3, 4, 5 — Three phase ¼, 1, 2 Single phase.
Input Speeds A1425, B2925, C2850, D1425-2850 Dual Speed r.p.m

L1546 JUNIOR RANGE



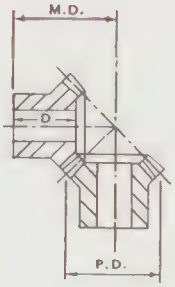


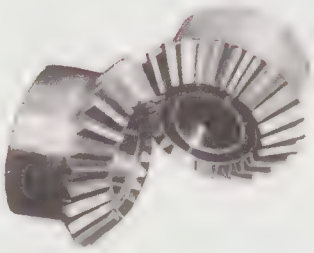
Three phase Standard or Flameproof.
Single phase T.E.F.C.
H.P. Rating ¼ h.p. above 52 r.p.m.
300 lbs inches below 52 r.p.m.
Output speed range 2700-450 r.p.m. to .042-.007 r.p.m.

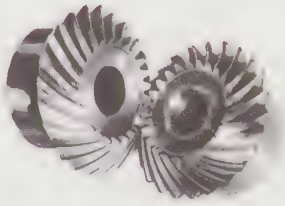
COMPLETE TECHNICAL CATALOGUES AVAILABLE ON REQUEST

L1547 STEEL MITRE GEARS

★ M.D. = Mounting Distance; this should not be made less than dimension shown.







Order by Catalogue Number.

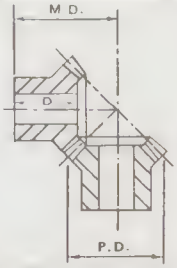
Cat. No.	Pitch	Teeth	P.D.	Face	Hole Min.	Hole Max.	D.	M.D.	Hub Diam.
MS125	12	15	1¼	⅜	⅜	½	2 3/32	1½	1
MS112	16	24	1½	⅜	½	½	2 7/32	1⅞	1
MS127	12	18	1½	7/16	½	⅝	1	1½	1¼
MS119	12	21	1¾	7/16	½	⅝	1 5/32	1¾	1⅜
MS113	12	24	2	½	½	¾	1 29/64	1⅞	1 7/16
MS128	10	20	2	5/16	½	¾	1 5/16	2	1⅜
MS114	12	30	2½	⅝	⅝	⅞	1 27/64	2 5/16	1⅜
MS130	10	25	2½	11/16	¾	1	1 37/64	2 7/16	2
MS115	8	24	3	¾	¾	1	1½	2 5/16	1¾
MS105	8	24	3	¾	1	1¼	1 11/16	2¼	2¼
MS116	8	24	3	¾	1¼	1⅜	1 11/16	2¾	2½
MS117	8	28	3½	⅞	1	1¼	2 1/32	3¼	2½
MS123	8	32	4	15/16	1	1⅜	2 5/16	3⅜	3
MS118	6	24	4	1 1/16	1¼	1½	2¼	3⅜	3
MS108	5	25	5	1⅜	1⅜	1¾	2 13/16	4⅜	3½
MS109	4	24	6	1⅜	1½	2¼	3½	5½	4

H.P. RATINGS AT TABULATED R.P.M.

SOFT CONDITION						HARD CONDITION					
Cat. No.	100	250	500	1,000	1,500	Cat. No.	100	250	500	1,000	1,500
MS125	.05	.10	.18	.30	.42	MS125	.20	.41	.73	1.23	1.71
MS112	.055	.11	.20	.35	.48	MS112	.09	.19	.33	.56	.77
MS127	.06	.12	.22	.37	.51	MS127	.22	.46	.81	1.36	1.88
MS119	.09	.18	.33	.55	.77	MS119	.29	.60	1.07	1.79	2.48
MS113	.13	.27	.47	.80	1.11	MS113	.40	.83	1.47	2.47	3.42
MS128	.14	.29	.51	.86	1.19	MS128	.46	.95	1.69	2.84	3.94
MS114	.26	.54	.95	1.60	2.22	MS114	.65	1.35	2.39	4.02	5.57
MS130	.27	.56	.99	1.67	2.31	MS130	.78	1.62	2.87	4.82	6.68
MS115	.42	.87	1.54	2.59	3.59	MS115	1.34	2.79	4.94	8.29	11.40
MS105	.42	.87	1.54	2.59	3.59	MS105	1.34	2.79	4.94	8.29	11.40
MS116	.42	.87	1.54	2.59	3.59	MS116	1.34	2.79	4.94	8.29	11.40
MS117	.65	1.35	2.39	4.02	5.57	MS117	1.88	3.91	6.93	11.63	16.10
MS123	.95	1.97	3.50	5.88	8 14	MS123	2.80	5.83	10.33	17.33	24.00
MS118	1.00	2.08	3.69	6 19	8 57	MS118	3.26	6.79	12.02	20.17	27.90
MS108	1.85	3.85	6.82	11.45	15.85	MS108	6.28	13.08	23.17	38.87	53.80
MS109	3.00	6.24	11.07	18.57	25 71	MS109	11.00	22.90	40.50	68.00	94.00

L1548 STEEL SPIRAL MITRE GEARS

★ These gears may be used in the same space as that for straight tooth mitres. Mounting Distance M.D.; this should not be made less than dimension shown.



Order by Catalogue Number

Cat. No.	Pitch	Teeth	P.D.	Face	Hole Min.	Hole Max.	D.	M.D.	Hub Diam.
SMS104	10	25	2½	5/16	⅞	1⅛	1 13/32	2 7/16	2
SMS105	7	21	3	11/16	1	1¼	1⅜	2¾	2¼
SMS106	8	28	3½	¾	1¼	1⅜	1 11/32	3¼	2½
SMS107	6	24	4	⅞	1½	1⅝	2 3/16	3⅝	3
SMS118	6	24	4	1 1/16	1¼	1⅜	2¼	3⅜	3
SMS108	5	25	5	1 3/16	1¾	2	2 13/16	4⅜	3½

H.P. RATINGS AT TABULATED R.P.M.

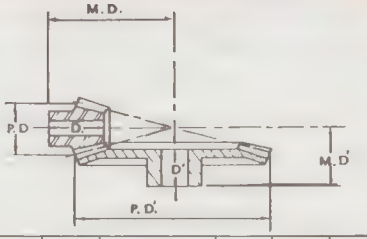
Cat. No.	100	250	500	1,000	1,500
SMS104	.57	1.18	2.10	3.52	4.88
SMS105	1.28	2.66	4.72	7.92	10.97
SMS106	1.75	3.64	6.45	10.83	15.00
SMS107	2.98	6.21	11.00	18.44	25.54
SMS118	3.05	6.35	11.25	18.88	26.14
SMS108	4.83	10.06	17.82	29.90	41.40

L1549

IRON AND STEEL BEVELS

Bevel Gears are used for the transmission of power at right angles, where there is to be a change in the speed ratio.
Bevel Gears and Pinions of different ratios are not interchangeable. They must be run together in pairs as indicated.

To ensure quietness and long life in service, pinions and gears in the larger ratios are generated with a special tooth form.
M.D. = Mounting Distance. This should not be made less than dimension shown.
Stock bevels ranging from 4 to 12 diametral pitch.



★ **Order by Catalogue Number in Pairs only**

Cat. No.	Matl.	Teeth	P.D.	Face	Hole Min.	Hole Max.	D.	M.D.	Hub Diam.
GP3212	C.I.	36	3	1/2	5/8	3/4	7/8	1 1/2	1 7/16
12 Pitch	Steel	18	1 1/2		1/2	5/8	1 5/32	2 1/2	1 1/2
GP4212B	C.I.	48	4	5/8	5/8	3/4	1 11/32	2	1 3/8
12 Pitch	Steel	24	2		1/2	5/8	1 3/8	2 5/8	1 1/2
GP45312	C.I.	54	4 1/2	5/8	5/8	3/4	1 3/32	1 3/4	1 3/4
12 Pitch	Steel	18	1 1/2		1/2	5/8	1 23/32	3	1 1/2
GP6412	C.I.	72	6	5/8	3/4	7/8	1 5/16	2	2
12 Pitch	Steel	18	1 1/2		1/2	5/8	1 3/8	3 3/4	1 1/2
GP6612B	C.I.	72	6	3/4	3/4	7/8	1 5/16	1 3/4	2
12 Pitch	Steel	12	1		1/2	1/2	1 1/2	3 3/4	1 1/16
GP153B	Steel	30	3	5/8	3/4	1 1/8	1 1/2	2 1/4	2 1/2
10 Pitch	Steel	20	2		3/4	1 3/16	1 7/16	2 1/2	1 3/4
GP155B	Steel	40	4	3/4	7/8	1 1/4	1 43/64	2 1/2	3
10 Pitch	Steel	20	2		3/4	1 3/16	1 59/64	3 1/8	1 3/4
GP5210	C.I.	50	5	3/4	3/4	7/8	1 13/32	2 3/8	2
10 Pitch	Steel	25	2 1/2		3/4	7/8	1 11/16	3 1/8	2
GP157B	Steel	60	6	13/16	1	1 1/4	1 43/64	2 3/4	3
10 Pitch	Steel	20	2		3/4	7/8	2 7/64	4 1/8	1 3/4
GP6310B	C.I.	60	6	13/16	7/8	1 1/4	1 43/64	2 3/4	3
10 Pitch	Steel	20	2		3/4	7/8	2 7/64	4 1/8	1 3/4
GP6410B	C.I.	60	6	3/4	7/8	1 1/4	1 5/8	2 1/4	2 1/4
10 Pitch	Steel	15	1 1/2		5/8	1 1/16	1 5/8	3 1/8	1 7/16
GP9610B	C.I.	90	9	7/8	1	1 1/4	1 13/16	2 1/2	2 3/4
10 Pitch	Steel	15	1 1/2		5/8	1 1/16	1 7/8	5 1/2	1 7/16
GP156B	Steel	40	5	7/8	1	1 1/4	1 43/64	2 7/8	3
8 Pitch	Steel	20	2 1/2		7/8	1	2 1/32	4	2 1/4
GP528B	C.I.	40	5	7/8	1	1 1/4	1 47/64	2 7/8	3
8 Pitch	Steel	20	2 1/2		7/8	1	2 7/16	4	2 1/4
GP638	C.I.	48	6	7/8	7/8	1 1/8	1 3/8	2 3/4	2 3/4
8 Pitch	Steel	16	2		3/4	7/8	2 1/8	4 1/4	1 3/4

Cat. No.	Matl.	Teeth	P.D.	Face	Hole Min.	Hole Max.	D.	M.D.	Hub Diam.
GP848B	C.I.	64	8	7/8	1	1 1/8	1 7/8	2 3/4	2 3/4
8 Pitch	Steel	16	2		7/8	1 1/8	2 1/8	5 1/4	1 7/8
GP948B	C.I.	72	9	1 1/4	1 1/8	1 1/4	2 7/16	3 1/4	3
8 Pitch	Steel	18	2 1/4		7/8	1 5/16	2 1/2	5 3/4	2 1/8
GP158B	Steel	36	6	1 1/8	1 1/8	1 3/8	2 23/64	3 1/4	3 1/4
6 Pitch	Steel	18	3		1	1 1/8	2 41/64	4 1/2	2 1/2
GP626B	C.I.	36	6	1 1/8	1 1/8	1 3/8	2 23/64	3 1/2	3 1/4
6 Pitch	Steel	18	3		1	1 1/8	2 41/64	4 3/4	2 1/2
GP726B	C.I.	42	7	1 1/8	1 1/8	1 1/2	2 13/64	3 3/4	3 1/2
6 Pitch	Steel	21	3 1/2		1	1 1/2	2 3/8	5	2 1/2
GP826B	C.I.	48	8	1 1/2	1 1/8	1 1/2	1 47/64	3 7/16	3
6 Pitch	Steel	24	4		1	1 1/2	2 41/64	5 7/16	2 3/8
GP7536	C.I.	45	7 1/2	1 1/8	1 1/8	1 3/8	2 1/8	3	3 1/4
6 Pitch	Steel	15	2 1/2		7/8	1	2 1/2	5 1/4	2 1/8
GP1046	C.I.	60	10	1 1/4	1 1/8	1 3/8	2 1/4	3 1/4	3 1/4
6 Pitch	Steel	15	2 1/2		1	1 1/8	2 3/8	6 3/4	2 1/2
GP625	C.I.	30	6	1 3/8	1 1/8	1 3/8	2 7/16	3 1/2	3 1/4
5 Pitch	Steel	15	3		1	1 1/8	2 1/2	4 3/8	2 3/8
GP935B	C.I.	45	9	1 3/8	1 1/4	1 5/8	2 1/2	3 3/4	3 3/4
5 Pitch	Steel	15	3		1	1 1/8	2 7/16	5 5/8	2 3/8
GP1245B	C.I.	60	12	1 3/4	1 1/4	1 5/8	2 3/8	3 3/4	4
5 Pitch	Steel	15	3		1	1 1/8	3 1/4	7 1/2	3
GP824B	C.I.	32	8	1 1/2	1 1/8	1 5/8	2 11/16	4 1/4	3 3/4
4 Pitch	Steel	16	4		1 1/8	1 3/8	3 13/64	6	3 1/4
GP10534	C.I.	42	10 1/2	1 1/2	1 1/8	1 3/8	2 11/16	4	3 3/4
4 Pitch	Steel	14	3 1/2		1 1/8	1 7/16	3 7/16	7 1/4	3 1/2
GP1444	C.I.	56	14	1 3/4	1 1/4	1 3/4	2 7/8	4 1/4	4 1/4
4 Pitch	Steel	14	3 1/2		1 1/8	1 1/4	3 3/8	9	3 1/4

H.P. Ratings at Tabulated R.P.M.

Cat. No.	100	250	500	1,000	1,500
GP3212	.05	.10	.18	.32	.44
GP4212B	.11	.23	.40	.71	.98
GP45312	.075	.16	.29	.50	.70
GP6412	.09	.20	.35	.61	.86
GP6612B	.05	.11	.20	.36	.49
GP153B Untreated	.19	.39	.70	1.17	1.62
GP153B Hardened	.59	1.23	2.17	3.65	5.00
GP155B Untreated	.26	.54	.96	1.60	2.20
GP155B Hardened	.74	1.54	2.70	4.58	6.30
GP5210	.17	.36	.63	1.11	1.50
GP157B Untreated	.33	.68	1.21	2.04	2.80
GP157B Hardened	.93	1.93	3.40	5.75	7.97
GP6310B	.15	.32	.59	1.01	1.40
GP6410B	.10	.22	.39	.68	.95
GP9610B	.13	.29	.52	.94	1.28
GP156B Untreated	.46	.95	1.70	2.84	3.90
GP156B Hardened	1.40	2.90	5.10	8.60	12.00

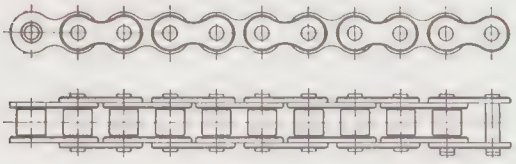
Cat. No.	100	250	500	1,000	1,500
GP528B	.23	.49	.85	1.50	2.05
GP638	.17	.37	.66	1.14	1.60
GP848B	.19	.42	.75	1.30	1.80
GP948B	.34	.75	1.34	2.30	3.24
GP158B Untreated	.78	1.62	2.87	4.80	6.68
GP158B Hardened	2.70	5.60	9.96	16.70	23.00
GP626B	.39	.84	1.45	2.54	3.48
GP726B	.56	1.20	2.08	3.65	5.00
GP826B	.90	1.90	3.35	5.87	8.00
GP7536	.32	.70	1.25	2.15	3.00
GP1046	.41	.90	1.62	2.80	3.90
GP625	.43	.92	1.60	2.80	3.84
GP935B	.55	1.20	2.16	3.70	5.16
GP1245B	.75	1.65	2.97	5.14	7.16
GP824B	1.15	2.47	4.28	7.51	10.25
GP10534	1.08	2.36	4.24	7.27	10.15
GP1444	1.05	2.31	4.17	7.20	10.03

ROLLER CHAINS

DIMENSIONS IN INCHES EXCEPT WHERE M.M. ARE SPECIFIED

L1550 SIMPLEX ROLLER CHAINS

USA Standard ASA B 29.1 — 1957
British Standard B.S. 228 — 1962

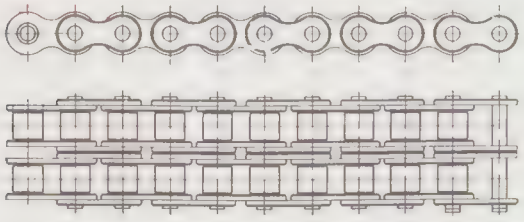


Chain No.	Standard Designation B.S. or ASA	Pitch	Width between inner plates	Width over inner link	Roller diam.	Mean breaking load FB mean lb.
Re 112	B.S. 228/ 2S	.375	.155	.261	.250	2600
Re 116	B.S. 228/ 3S	.375	.225	.336	.250	2600
Mf 217		.500	.252	.376	.305	3520
Re 217		.500	.252	.391	.335	4940
Re 222	B.S. 228/ 7S	.500	.305	.444	.335	4940
Re 317	B.S. 228/10S	.625	.255	.397	.400	6170
Re 323	B.S. 228/11S	.625	.380	.522	.400	6170
Re 424	B.S. 228/13S	.750	.460	.615	.475	7380
Re 526	B.S. 228/15S	1.000	.670	1.002	.625	15600
Re 292	ASA 40	.500	.313	.440	.313	4200
Re 297	ASA 41	.500	.250	.359	.305	3080
Re 393	ASA 50	.625	.375	.545	.400	6600
Re 485(2)	ASA 60 H	.750	.500	.765	.469	8800
Re 495(3)	ASA 60	.750	.500	.699	.469	8800
Re 596(3)	ASA 80	1.000	.625	.890	.625	15600
Re 698(3)	ASA 100	1.250	.750	1.081	.750	23400
Re 790(3)	ASA 120	1.500	1.000	1.396	.875	33100
Re 798(3)	ASA 140	1.750	1.000	1.464	1.000	41900
Re 890(3)	ASA 160	2.000	1.250	1.780	1.125	55100
Re 215	B.S. 228/6S	.500	.205	.344	.335	4990
Re 284		.500	.192	.341	.305	3970
Re 525a		1.000	.500	.748	.500	11700
Re 525b		1.000	.500	.748	.551	11700

(2) Heavy series
(3) Under designation Re C also available in cottered pattern.

L1551 DUPLEX ROLLER CHAINS

USA Standard ASA B 29.1 — 1957
British Standard B.S. 228 — 1962

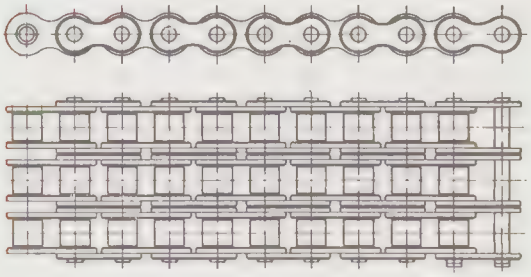


Chain No.	Standard Designation B.S. or ASA.	Pitch	Transverse pitch	Width between inner plates	Width over inner link	Roller diam.	Mean breaking load FB Mean lb
Rz 116	B.S. 228/ 3D	.375	.403	.225	.336	.250	4400
Rz 222	B.S. 228/ 7D	.500	.548	.305	.444	.335	9370
Rz 323	B.S. 228/11D	.625	.653	.380	.522	.400	12350
Rz 424	B.S. 228/13D	.750	.766	.460	.615	.475	14800
Rz 526	B.S. 228/15D	1.000	1.255	.670	1.002	.625	30900
Rz 292	ASA 40-2	.500	.566	.313	.440	.313	8250
Rz 393	ASA 50-2	.625	.713	.375	.545	.400	13200
Rz 495(2)	ASA 60-2	.750	.897	.500	.699	.469	17600
Rz 596(2)	ASA 80-2	1.000	1.153	.625	.890	.625	30900
Rz 698(2)	ASA 100-2	1.250	1.408	.750	1.081	.750	46700
Rz 790(2)	ASA 120-2	1.500	1.789	1.000	1.396	.875	66100
Rz 798(2)	ASA 140-2	1.750	1.924	1.000	1.464	1.000	82700
Rz 890(2)	ASA 160-2	2.000	2.305	1.250	1.780	1.125	110200

(2) Under designation RzC or RdC also available in cottered pattern.

L1552 TRIPLEX ROLLER CHAINS

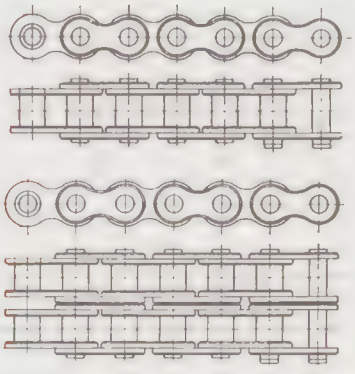
USA Standard ASA B 29.1 — 1957
British Standard B.S. — 1962



Chain No.	Standard Designation B.S. or ASA.	Pitch	Transverse pitch	Width between inner plates	Width over inner link	Roller diam.	Mean breaking load FB mean lb.
Rd 116	B.S. 228/ 3T	.375	.403	225	.336	.250	6170
Rd 222	B.S. 228/ 7T	.500	.548	.305	.444	.335	13200
Rd 323	B.S 228/11T	.625	.653	.380	.522	.400	17600
Rd 424	B.S. 228/13T	.750	.766	.460	.615	.475	22000
Rd 526	B.S. 228/15T	1.000	1.255	.670	1.002	.625	45400
Rd 292	ASA 40-3	.500	.566	.313	.440	.313	12300
Rd 393	ASA 50-3	.625	.713	.375	.545	.400	19400
Rd 495(2)	ASA 60-3	.750	.897	.500	.699	.469	26000
Rd 596(2)	ASA 80-3	1.000	1.153	.625	.890	.625	45400
Rd 698(2)	ASA 100-3	1.250	1 408	.750	1.081	.750	69500
Rd 790(2)	ASA 120-3	1 500	1.789	1.000	1.396	.875	99200
Rd 798(2)	ASA 140-3	1.750	1.924	1.000	1.464	1.000	123500
Rd 890(2)	ASA 160-3	2.000	2.305	1.250	1.780	1.125	165500

(2) Under designation RzC or RdC also available in cottered pattern.

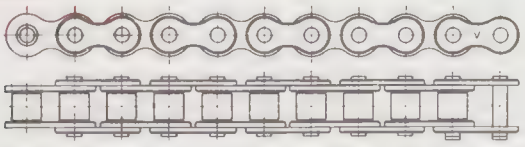
L1553 BUSH CHAINS



Chain No.	Commercial Designation	Pattern	Pitch	Transverse pitch	Width between inner plates	Width over inner link	Bush diam.	Mean breaking load FB mean lb.
He 121	$\frac{3}{8}$ x 7.5 m.m.	Simplex	.375	—	.295	.423	.197	2900
He 123	$\frac{3}{8}$ x $\frac{3}{8}$	Simplex	.375	—	.375	.522	.236	3090
He 113	$\frac{3}{8}$ x 4.5 m.m.	Simplex	.375	—	.177	.300	.197	2900
Hz 113	$\frac{3}{8}$ x 4.5 m.m.	Duplex	.375	.383	.177	.300	.197	5200
Hz 194	$\frac{3}{8}$ x $\frac{1}{2}$	Duplex	.375	.378	.188	.316	.200	4400
Hd 194	$\frac{3}{8}$ x $\frac{1}{2}$	Triplex	.375	—	.188	—	.200	6600

ROLLER CHAINS WITH PLASTIC LOW-FRICTION BEARINGS

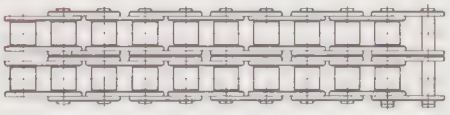
L1557 SIMPLEX ROLLER CHAINS



Chain No.	Commercial designation	Pitch	Width between inner plates	Width over inner link	Roller diam.	Mean breaking load FB mean lb.
Rek 222	$\frac{1}{4}$ x $\frac{5}{16}$"	.500	.305	.444	.335	3970
Rek 323	$\frac{3}{8}$ x $\frac{3}{8}$"	.625	.380	.522	.400	5500
Rek 393	$\frac{3}{8}$ x $\frac{3}{8}$"	.625	.375	.545	.400	5500
Rek 424	$\frac{1}{4}$ x $\frac{7}{16}$"	.750	.460	.615	.475	6940
Hek 488(1)	.787 x .630	.787	.630	.906	.472	8270
Rek 495	$\frac{3}{4}$ x $\frac{1}{2}$"	.750	.500	.699	.469	8270
Rek 525 a	1 x $\frac{1}{2}$"	1.000	.500	.748	.500	11850
Rek 525 b	1 x $\frac{1}{2}$"	1.000	.500	.748	.551	11850
Rek 526	1 x .670	1.000	.670	1.002	.625	14770
Rek 596	1 x $\frac{5}{8}$"	1.000	.625	.890	.625	14770
Rek 698	1$\frac{1}{4}$ x $\frac{3}{4}$"	1.250	.750	1.081	.750	23370
Rek 790	1$\frac{1}{2}$ x 1"	1.500	1.000	1.396	.875	30870
Rek 798	1$\frac{3}{4}$ x 1"	1.750	1.000	1.464	1.000	39700
Rek 890	2 x 1$\frac{1}{4}$"	2.000	1.250	1.780	1.125	49400

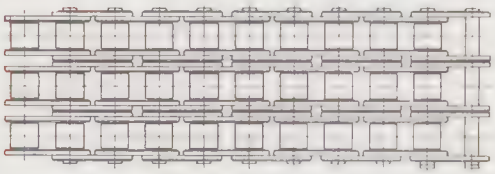
(1) Bush Chain

L1558 DUPLEX ROLLER CHAINS



Chain No.	Commercial designation	Pitch	Transverse pitch	Width between inner plates	Width over inner link	Roller diam.	Mean breaking load FB mean lb.
Rzk 222	$\frac{1}{4}$ x $\frac{5}{16}$"	.500	.548	.305	.444	.335	7800
Rzk 323	$\frac{3}{8}$ x $\frac{3}{8}$"	.625	.653	.380	.522	.400	11000
Rzk 393	$\frac{3}{8}$ x $\frac{3}{8}$"	.625	.713	.375	.545	.400	11000
Rzk 424	$\frac{1}{4}$ x $\frac{7}{16}$"	.750	.766	.460	.615	.475	13900
Rzk 495	$\frac{3}{4}$ x $\frac{1}{2}$"	.750	.897	.500	.699	.469	16500
Rzk 526	1 x .670	1.000	1.255	.670	1.002	.625	29100
Rzk 596	1 x $\frac{5}{8}$"	1.000	1.153	.625	.890	.625	29100
Rzk 698	1$\frac{1}{4}$ x $\frac{3}{4}$"	1.250	1.408	.750	1.081	.750	46750
Rzk 790	1$\frac{1}{2}$ x 1"	1.500	1.789	1.000	1.396	.875	61700
Rzk 798	1$\frac{3}{4}$ x 1"	1.750	1.924	1.000	1.464	1.000	78280
Rzk 890	2 x 1$\frac{1}{4}$"	2.000	2.305	1.250	1.780	1.125	99220

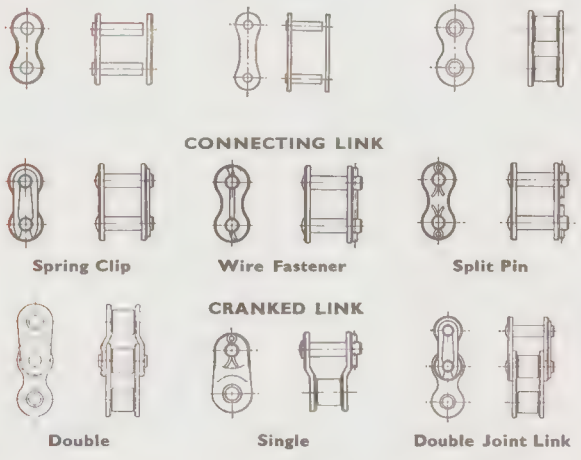
L1559 TRIPLEX ROLLER CHAINS



Chain No.	Commercial designation	Pitch	Transverse pitch	Width between inner plates	Width over inner link	Roller diam.	Mean breaking load FB mean lb.
Rdk 222	$\frac{1}{4}$ x $\frac{5}{16}$"	.500	.548	.305	444	.335	11700
Rdk 323	$\frac{3}{8}$ x $\frac{3}{8}$"	.625	.653	.380	.522	.400	16500
Rdk 393	$\frac{3}{8}$ x $\frac{3}{8}$"	.625	.713	.375	.545	.400	16500
Rdk 424	$\frac{1}{4}$ x $\frac{7}{16}$"	.750	.766	.460	.615	.475	20950
Rdk 495	$\frac{3}{4}$ x $\frac{1}{2}$"	.750	.897	.500	.699	.469	24700
Rdk 526	1 x .670"	1.000	1.255	.670	1.002	.625	44100
Rdk 596	1 x $\frac{5}{8}$"	1.000	1.153	.625	.890	.625	44100
Rdk 698	1$\frac{1}{4}$ x $\frac{3}{4}$"	1.250	1.408	.750	1.081	.750	69450
Rdk 790	1$\frac{1}{2}$ x 1"	1.500	1.789	1.000	1.396	.875	93700
Rdk 798	1$\frac{3}{4}$ x 1"	1.750	1.924	1.000	1.464	1.000	116800
Rdk 890	2 x 1$\frac{1}{4}$"	2.000	2.305	1.250	1.780	1.125	147700

CHAIN ACCESSORIES FOR SIMPLEX, DUPLEX AND LONG PITCH CHAINS

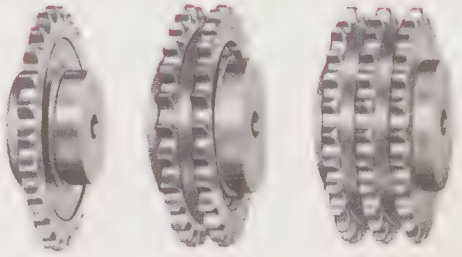
L1562



SPROCKETS FOR ROLLER CHAIN

L1554 A.S.A. or B.S. Standard Chain Steel Boss Type or Plate Type, Cast Iron

	Chain Pitch	No. of Teeth
Simplex	$\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$", 1"	9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 57, 76, 95, 114
	1$\frac{1}{4}$", 1$\frac{1}{2}$"	15, 17, 19, 21, 23, 25, 38, 57, 76.
Duplex	$\frac{3}{8}$", $\frac{1}{2}$", $\frac{5}{8}$", $\frac{3}{4}$", 1"	11, 13, 15, 17, 19, 20, 21, 23, 25, 38, 57, 76, 95, 114.
Triplex	$\frac{3}{8}$", $\frac{1}{2}$", $\frac{3}{4}$", 1"	17, 19, 20, 21, 23, 25, 38, 57, 76, 95, 114.



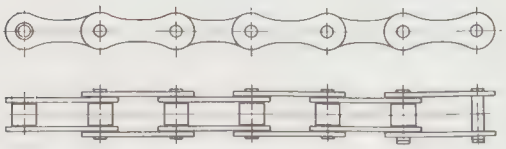
DIMENSIONS INCHES

LONG-PITCH ROLLER CHAINS

DIMENSIONS INCHES

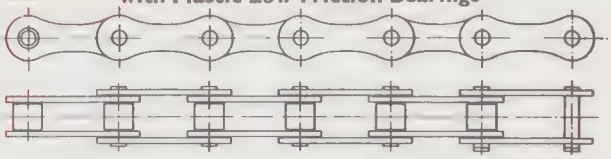
L1560 LONG-PITCH ROLLER CHAINS

USA Standard ASA B 29.3 - 1954
ASA B 29.4 - 1954
Brit. Standard B.S. 2947 : 1958
B.S. 228 : 1962



Chain No.	Standard designation	Pitch	Width between inner plates	Width over inner link	Roller diam	Mean breaking load FB mean lb.
RL 592	ASA B29.3 2040	1.000	.313	.440	.313	3970
RL 693	ASA B29.3 2050	1.250	.375	.545	.400	6170
RL 786(1)	ASA B29.4 C-2060	1.500	.500	.765	.469	8820

L1561 LONG-PITCH ROLLER CHAINS with Plastic Low-Friction Bearings

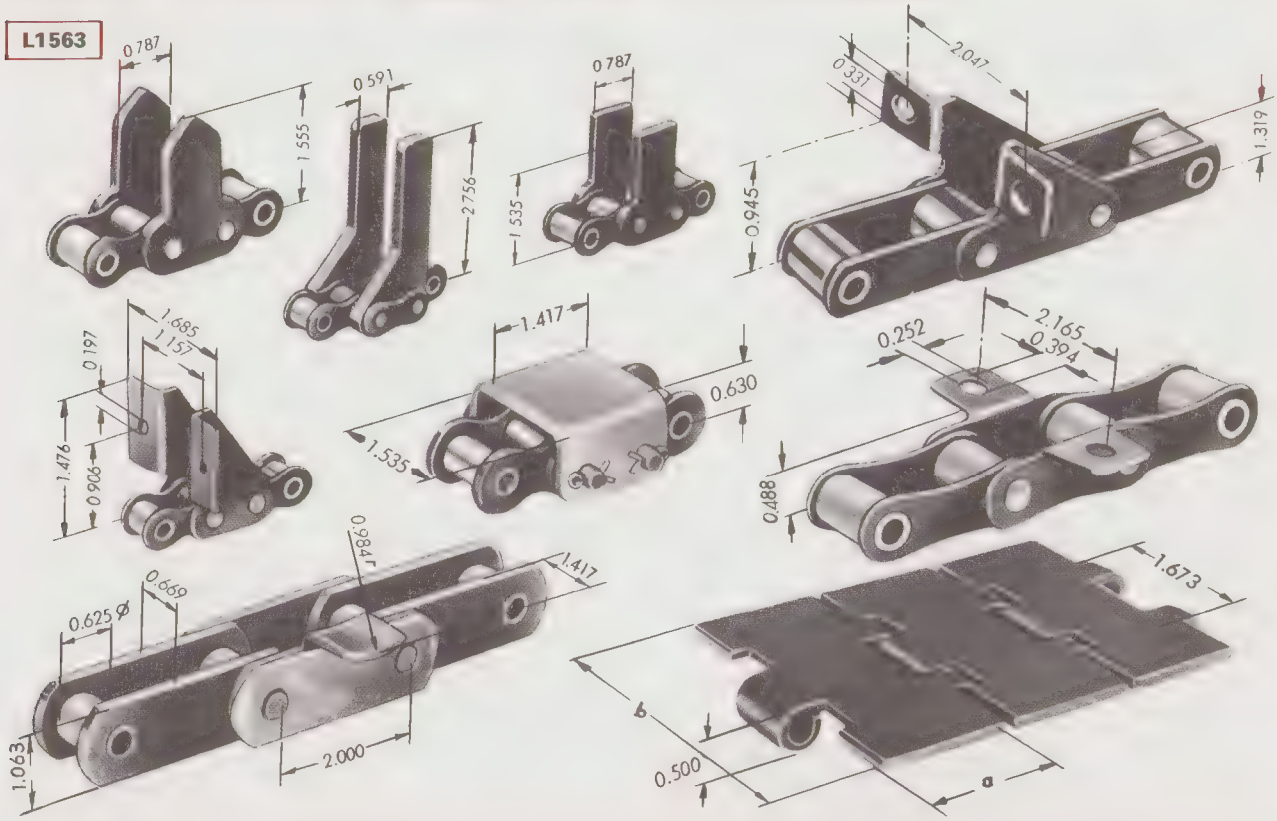


Chain No.	Commercial designation	Pitch	Width between inner plates	Width over inner link	Roller diam.	Mean breaking load FB mean lb.
RLK 623	1 1/4 x 3/8"	1.250	.380	.522	.400	5500
RLK 724	1 1/2 x 7/16"	1.500	.460	.615	.475	6950
RLK 728(1)	1.512 x 0,748"	1.512	.748	.947	.625	6170
RLK 729(1)	1.512 x 0.748"	1.512	.748	.947	.551	4190
RLK 740	1 1/2 x 0,875"	1.500	.875	1.125	.600	6950
RLK 742	1.63 x 0,875"	1.630	.875	1.125	.600	6950
RLK 744	1.63 x 0.875"	1.630	.875	1.125	.700	6950
RLK 750	1.598 x 0,866"	1,598	.866	1.083	.551	8270
RLK 752	1.63 x 0,827"	1.630	.827	1.055	.630	8820
RLK 753	1.63 x 0,807"	1.630	.807	1.055	.630	9370
RLK 826(1)	2 x 0,669"	2.000	.670	1.002	.625	14700
HLK 1150 (1)	3.15 x 0,866"	3.150	.866	1.205	.709	13200
HLK 1350 (1)	3.937 x 0,866"	3.937	.866	1.205	.709	13200
HLK 1650 (2)	4.921 x 0,866"	4.921	.866	1.205	.709	13200
HLK 1950 (2)	6.3 x 0,866"	6.299	.866	1.205	.709	13200

(1) Straight link plates (2) Bush chains, also available as pattern RL with rollers, 1,575" diam., and/or with hollow pins, 0,3307" bore diam.

SPECIAL PURPOSE CHAINS WITH ATTACHMENTS

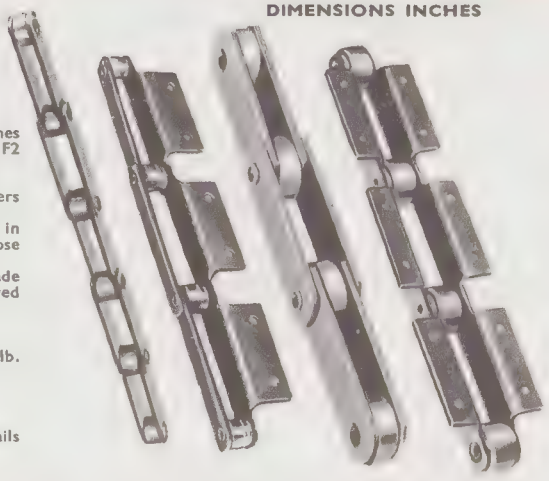
L1563



DEEJAY CHAINS

L1564 for Conveyors and Elevators

DIMENSIONS INCHES



A standard series is manufactured in breaking loads from 3,000 lb. to 85,000 lb. and pitches from 2" to 24". These are medium duty chains and can be fitted with K1, K2, F1 or F2 standard attachments, or special attachments to suit customers' needs.
Special and/or heavy duty chains can be supplied upon request.
A wide range of chains to replace those manufactured overseas by leading chain makers for use in industrial, mining and earth moving equipment can be supplied.
A range of all steel chains to replace combination steel and malleable cast iron chains in popular use is available. These chains will in most cases give superior service to those chains they are replacing.
Sprocket wheels in a variety of materials are available — standard sprockets being made in high tensile alloyed cast iron, and generally supplied bored, keywayed and set screwed to customers requirements.

SLATBAND CONVEYOR CHAINS

Steel or Chromsteel — Pitch 1½", Slat Width 1¼" to 7½", Maximum Working Loads 275 lb. to 1,600 lb.

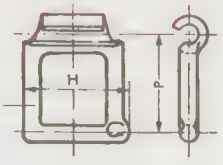
THERMOPLASTIC — Pitch 1½", Slat Width 3¼"-7½".

DRIVE SPROCKETS — 1" Bore 17 to 24 Teeth.

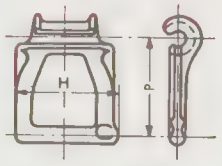
MOULDED RUBBING STRIP — for Surfaces in Sliding Contact complete details available on application.

BAGSHAWE 'BB' EWART CHAINS

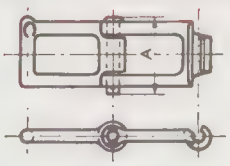
L1565



Type A Plain Hook



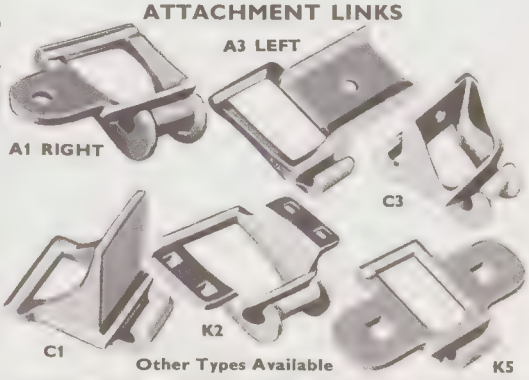
Type B Flanged Hook



Coupling Links

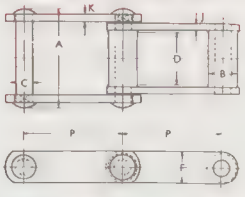
Chain No.	Approx. Pitch P inches	Links to Nominal 10-ft. Coil	Average Ultimate Strength lbs.	Approx. Weight per ft. lbs.	Type	Approx. Dimensions Inches	
						H	A
25	.90	133	700	.25	A	.8	—
42	1.37	88	1750	.55	A	1.2	1.7
45	1.63	74	1700	.55	A	1.3	—
51	1.15	104	2000	.75	A	1.2	—
52 Rib	1.51	80	2300	.80	A	1.5	—
55	1.64	74	2300	.80	A	1.3	—
W.55	1.64	73	3000	1.14	A	1.7	—
62	1.66	73	3500	1.20	A	1.6	2.2
62.S	1.51	80	2000	.75	A	1.4	—
B.U.62	1.68	72	3500	1.25	A	1.8	—
72½	1.68	72	4500	2.20	B	2.4	—
W.72½	1.68	72	5000	2.26	B	2.4	—
77	2.30	52	4000	1.50	B	2.3	2.6
88	2.61	46	6500	2.40	B	2.8	3.3
103	3.07	39	10000	4.00	B	3.2	—

ATTACHMENT LINKS



'BB' COMBINATION CHAINS

L1566

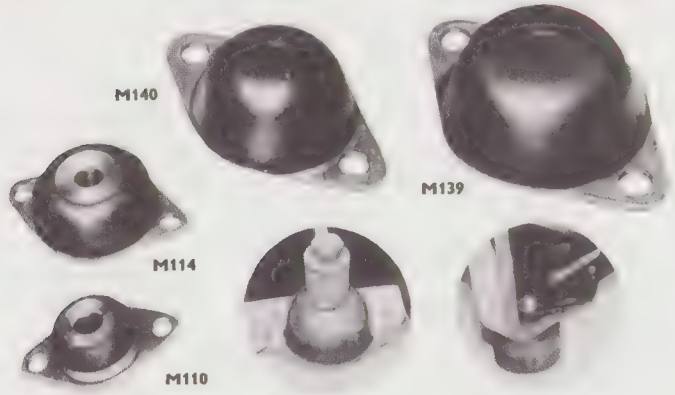


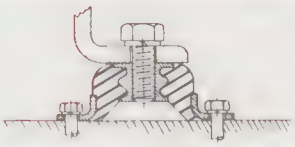
ATTACHMENT LINKS

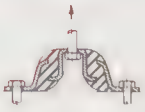
Chain No.	Approx. Pitch P inches	Links to Nominal 10-ft. Coil	Average Ultimate Strength lbs.	Approx. Weight per ft. lbs.	Approximate Dimensions inches						
					A	B	C	D	F	J	K
C.56	1.63	74	9000	2.5	1 7/8	3/4	3/8	11/16	3/8	3/16	3/16
C.102B	4.0	30	24000	7.5	4 1/8	1	5/8	2	1 1/8	5/16	3/8
C.102½	4.04	30	36000	9.5	4 1/8	1 3/8	3/4	2	1 3/8	3/8	3/8
C.110	6.0	20	24000	5.9	4 3/16	1 1/4	5/8	1 15/16	1 1/4	5/16	3/8
C.111	4.76	25	36000	8.5	4 13/16	1 7/16	3/4	2 3/8	1 3/4	3/8	3/8
C.112	6.0	20	30000	11.0	3 7/8	1 7/16	11/16	1 3/4	2	5/16	5/16
C.131	3.075	40	24000	6.5	3 3/8	1 9/32	5/8	1 7/16	1 1/2	9/32	3/8
C.132	6.05	20	50000	14.0	6 1/16	1 3/4	1	3 1/8	2	7/16	1/2
PW.132	6.05	20	50000	15.5	6 1/16	1 3/4	1	3 1/8	2	7/16	1/2
C.188	2.61	46	17500	3.5	2 7/16	7/8	1/2	15/16	1 1/4	7/32	1/4

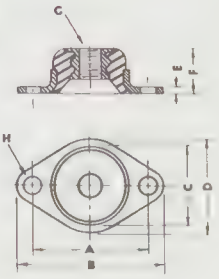
Malleable Iron Inner Link — Steel Outer Link
These chains can be supplied with pins and cotters or riveted as required

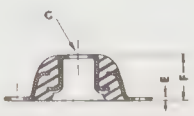
MACHINERY MOUNTINGS




Standard Method of Mounting


Mountings in Tandem Giving Double Deflection

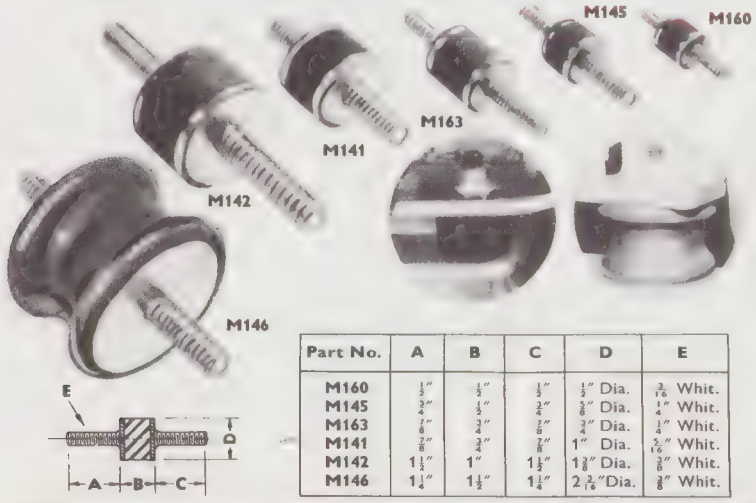




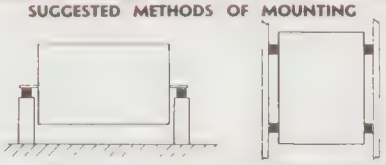
Part No.	A	B	C	D	E	F	G	H
M110	2⅜″	3″	1⅜″	1⅞″	¼″	⅞″	7/16″ SAE	11/32″ Dia.
M114	3″	3⅜″	2¼″	2⅜″	¼″	1⅛″	¼″ SAE	11/32″ Dia.
M140	4 5/16″	5 9/16″		3¼″	⅜″	1⅜″	17/32″ Dia.	13/32″ Dia.
M139	5″	6 7/16″		4″	⅜″	1⅝″	17/32″ Dia.	15/32″ Dia.

LOADING CHART		
Mounting	Durometer Hardness	Load in lbs.
M110	40	65- 90
	50	90- 125
M114	40	125- 210
	50	210- 290
	60	290- 360
M140	40	360- 500
	50	500- 700
	60	700- 950
	80	950-1250
M139	40	950-1200
	50	1200-1600
	60	1600-2000
Approximate Average Deflection .14″		

CUSHION CONNECTORS



SUGGESTED METHODS OF MOUNTING

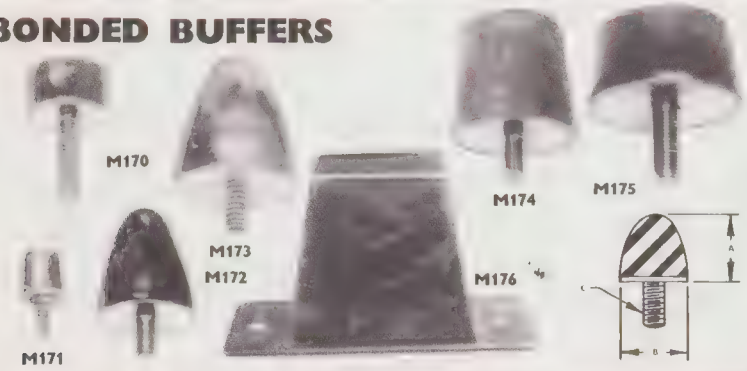


Part No.	A	B	C	D	E
M160	1/32″	1/32″	1/32″	1/32″ Dia.	3/16 Whit.
M145	3/64″	1/32″	1/64″	5/64″ Dia.	1/4″ Whit.
M163	1/16″	3/64″	1/16″	3/64″ Dia.	1/4″ Whit.
M141	7/64″	3/64″	1/16″	1″ Dia.	5/16″ Whit.
M142	1 1/32″	1″	1 1/32″	1 1/32″ Dia.	3/8″ Whit.
M146	1 1/64″	1 1/32″	1 1/64″	2 3/16″Dia.	3/8″ Whit.

LOADING CHART				
Mounting	Duro-meter Hardness	Load in lbs.		
		Compression	Tension	Shear
M160	—	10- 15	7- 10	1- 2
M145	—	15- 25	10- 15	2- 5
M163	—	25- 40	15- 20	5- 7
M141	—	40- 65	20- 25	7-10
M142	35	65- 95	25- 40	10-12
	40	95-125	40- 60	12-15
	50	125-150	60- 75	15-25
	60	150-175	75-100	25-40
Rated at .062″ Deflection				

M146	40 Duro	50 Duro	60 Duro
Compression 1/8″ Deflection	90 lbs.	140 lbs.	250 lbs.

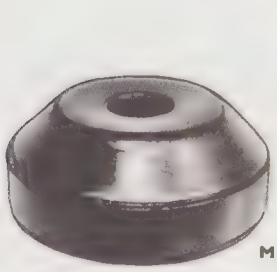
BONDED BUFFERS



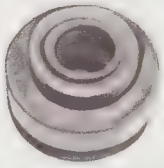
Part No.	A	B	C
M170	7/8″	1⅜″	⅜″ Whit.
M171	1 1/16″	1 1/16″	¼″ BSF
M172	2⅛″	1⅜″	⅜″ UNF
M173	2¼″	2″	⅜″ UNF
M174	2″	2″	⅜″ UNF
M175	1⅜″	2¼″	½″ BSF
M176	2⅛″	3″	—

Part No.	Compression Load in lbs.
M171	72
M172	25
M173	44
M174	140
Rated at .125″ Deflection	
M170	500
M175	400
M176	120
Rated at .250″ Deflection	

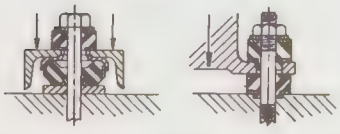
COMBINATION MACHINERY MOUNTINGS

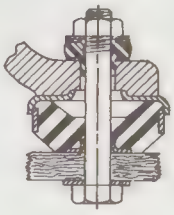


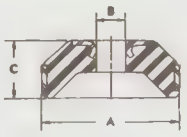
M 104

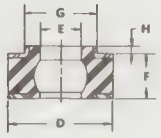


M 107







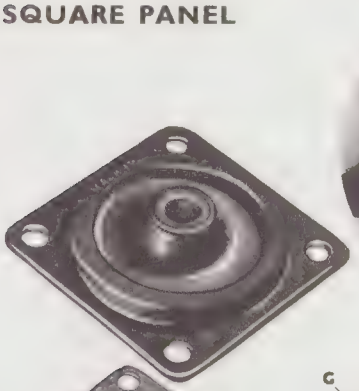


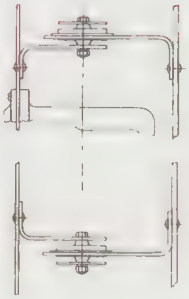
Durometer Hardness	Load in lbs.	Durometer Hardness	Load in lbs.
40	80	40	140
50	175	50	180
60	240	60	240
70	300	70	300
Recommended Deflection in Inches $\frac{1}{8}$" to $\frac{5}{32}$"			

A	$2\frac{3}{4}$"
B	$\frac{1}{8}$"
C	$1\frac{7}{16}$"
D	$1\frac{3}{8}$"
E	$\frac{3}{8}$"
F	$\frac{11}{16}$"
G	$1\frac{5}{32}$"
H	$\frac{5}{16}$"

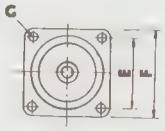
INSTRUMENT MOUNTINGS

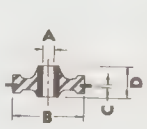
SQUARE PANEL





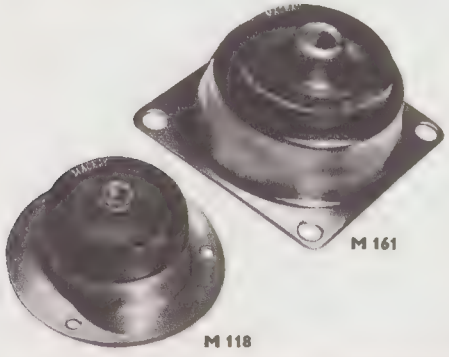
LOADING CHART		
Mounting	Normal Rating	Maximum Allowable Load
M117- 1	1 lb.	1 lb.
- 2	2	2
- 3	3	3
- 4	4	4
M116- 2	2 lb.	3 lb.
- 4	4	6
- 6	6	9
- 8	8	12
-10	10	15
-12	12	18
Normal Rating at .062" Deflection		





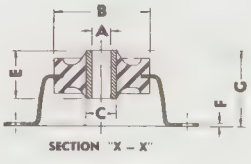
Part No.	A	B	C	D	E	F	G
M116	.257"	$1\frac{1}{2}$"	.048"	$\frac{3}{8}$"	$1\frac{3}{8}$"	$1\frac{3}{4}$"	.166" Diam.
M117	.166"	1"	.036"	$\frac{13}{32}$"	1"	$1\frac{1}{4}$"	.141" Diam.

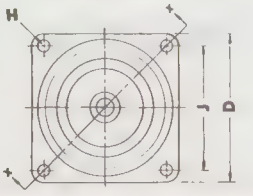
EXTENDED PANEL

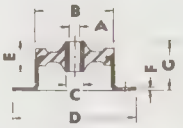


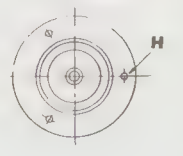
M 161

M 118







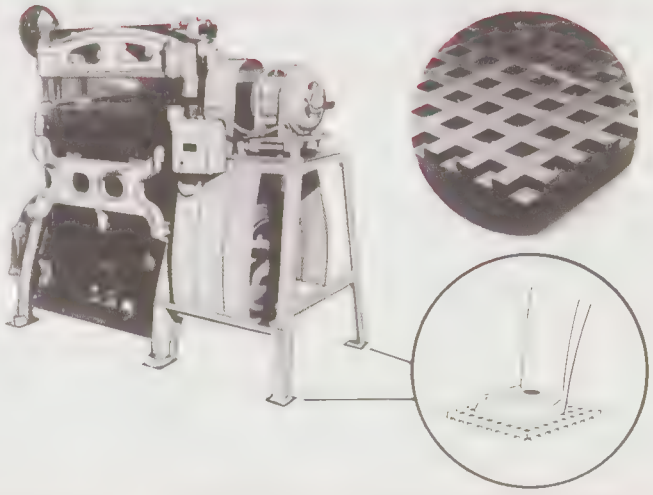


Part No.	M118	M161
A	.257" Diam.	.391" Diam.
B	$1\frac{7}{16}$" Diam.	2" Diam.
C	$\frac{3}{8}$" Diam.	$\frac{3}{8}$" Diam.
D	$2\frac{1}{2}$" Diam.	3"
E	$\frac{3}{8}$"	$1\frac{1}{16}$"
F	.036"	.048"
G	$1\frac{1}{32}$" $\frac{7}{64}$" Diam.	$1\frac{1}{2}$" .290" Diam.
H	($2\frac{1}{8}$" P.C.D.)	$2\frac{1}{2}$"

MACHINERY MOUNTING PADS

for
POWER PRESSES
LOW FREQUENCY FANS
COMPRESSORS
WOOD WORKING MACHINERY
SHOE MACHINERY

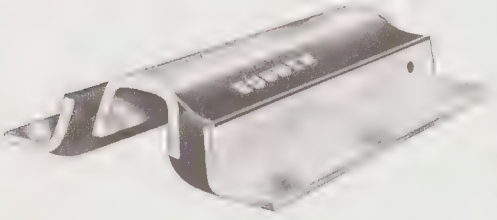
any machine where the load is between 10 lbs. p.s.i. and 60 lbs. p.s.i. — the optimum being at 50 lbs. p.s.i.
Manufactured in sheets of moulded neoprene 18″ x 18″.



UNIVERSAL VIBRATION DAMPENER

MAXIMUM PERMISSIBLE BOLT SIZE ¼″ DIAM.

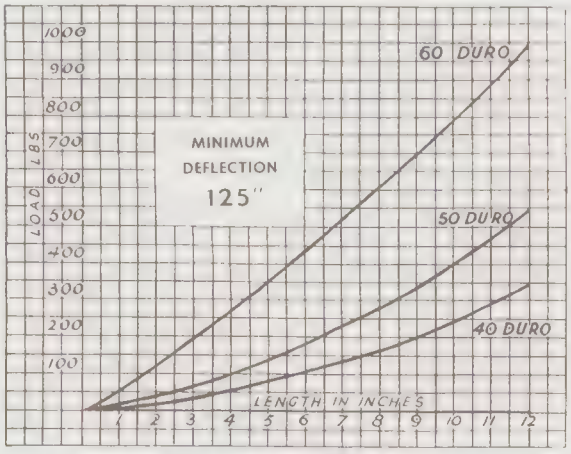
MAXIMUM PERMISSIBLE BOLT SIZE ⅜″ DIAM. AT 3⅞″ CTS.



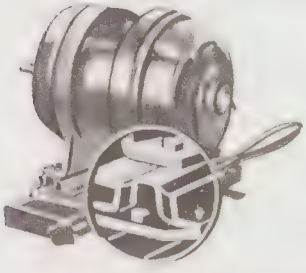
A	B	C	D	E
1⅜″	5″	⅛″	1″	1 7/16″

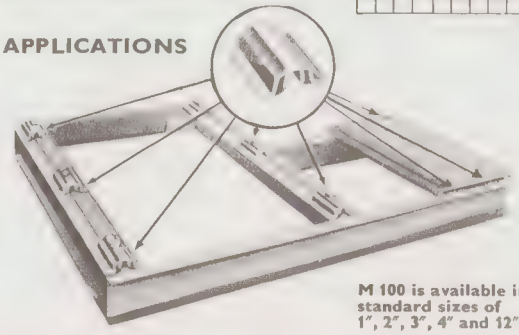
LOAD RATING CHART			
Length in Inches	Durometer		
	40	50	60
	Lbs.	Lbs.	Lbs.
1″	15	30	60
2″	30	50	125
3″	50	80	175
4″	80	120	250
5″	110	160	325
6″	140	200	400
7″	170	240	475
8″	200	300	575
9″	240	350	675
10″	280	400	775
11″	310	480	875
12″	350	550	1000
Multiples of these Loads Require Equivalent Multiples of Vibration Dampener			

GRAPH TO DETERMINE CARRYING CAPACITY



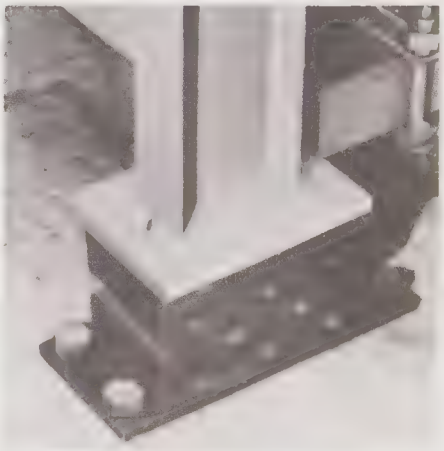
TYPICAL APPLICATIONS





M 100 is available in the standard sizes of 1″, 2″, 3″, 4″ and 12″ lengths.

HY-DEFLECTION MOUNTING M188



Description:

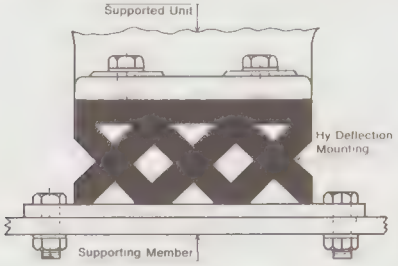
Mackay Hy-Deflection Mountings, provide flexible support for mechanical apparatus which is subject to intermittent or continuous, low frequency, high amplitude vibration. The design provides soft spring rate quality in all directions with exceptional horizontal stability.

Applications:

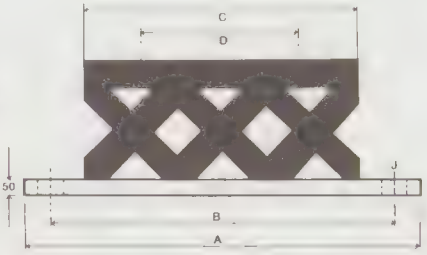
Vibrating Screens, Vibrating Conveyors, Generators, Industrial Refrigeration Units, Air Conditioning Compressors, Industrial Pumping Equipment and Shipboard Applications.

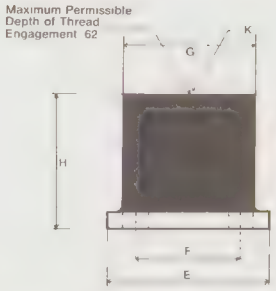
Maximum Recommended Load	Deflection at Maximum Load	A	B	C	D	E	F	G	H	J	K
(lbs) 700	(inches) .62	12.50″	10.88″	8.25″	4.75″	5.50″	3.25″	4.56″	4.94″	.76″	.625-18UNF-2B

Also available in additional load ratings



Typical Installation Arrangement

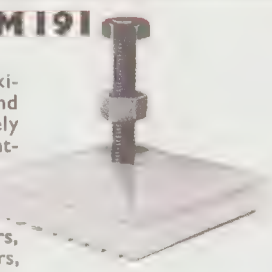


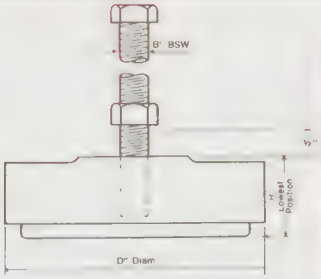


LEVEL-MOUNTING M191

Description:

The Mackay Level-Mount provides maximum efficiency against vibration and noise. Whilst also providing a completely adjustable method of Machinery Mounting.

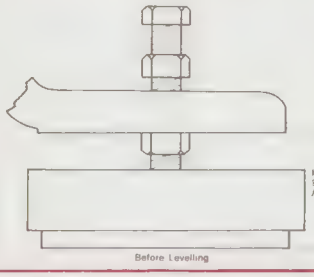




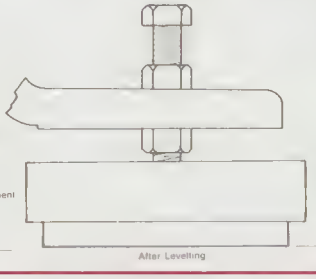
Application:

Lathes, Milling Machines, Grinders, Metalworking Shears, Presses, Shapers, Surface Grinders.

Rated Load lbs.	
1500	
Dimensions — Ins. D	H B
$5\frac{3}{16}$″	$1\frac{1}{2}$″ $\frac{3}{8}$″B.S.W.
Weight lbs.	
6.5	



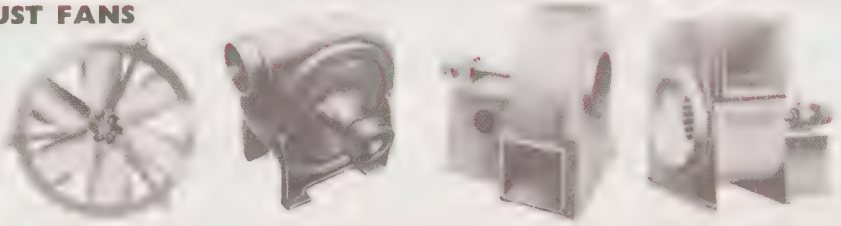
Before Levelling



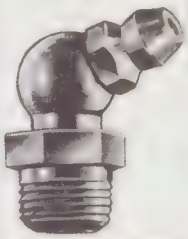
After Levelling

VENTILATION AND EXHAUST FANS — BLOWERS

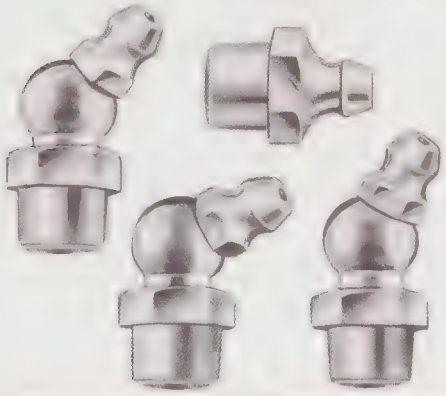
A comprehensive range of Propeller Fans, Multi-vane and Mill Exhaust Fans, Pressure, Gas and Oil Burner Blowers is available.
Complete technical details or catalogues available.



HYDRAULIC NIPPLES — SCREWED

					
Thread	**Straight**	**35° Angle**	**45° Angle**	**67½° Angle**	**90° Angle**
⅛ Gas (B.S.P.)	5P (H29)				
⅛ Gas (B.S.P.)	5 (H30)	39 (HA34)	7	38 (HA39)	8 (HA44)
¼ Gas	23 (H48)	97 (HA52)	24 (HA138)	41 (HA56)	40 (HA60)
⅛ Briggs (N.P.T.)	5B (H28)	39B (HA33)	7B	38B (HA37)	8B (HA43)
¼ Briggs (N.P.T.)	23B (H47)	97B (HA51)	24B	41B (HA55)	40B (HA59)
3/16 S.A.E.	98				
¼ S.A.E.	9 (H3)	72	10 (HA7)	410 (HA106)	11 (HA107)
¼ S.A.E. (Long Thread)	12 (H114)	236 (HA135)	13	237 (HA136)	14 (HA134)
5/16 S.A.E.	46 (H100)	202 (HA103)	203	100 (HA104)	201
⅜ S.A.E.	45 (H154)	204	205	50	206
¼ B.S.F.	37H (H1)	101 (HA5)	64	102 (HA8)	65 (HA10)
5/16 B.S.F.	18H (H12)	103 (HA16)	21H	104 (HA20)	22H (HA24)
⅜ B.S.F.	35 (H31)	207 (HA35)	208	36 (HA41)	33 (HA45)
½ B.S.F.	81 (H49)	209 (HA53)	82	83 (HA57)	84 (HA61)
¼ Whit.	91 (H2)	210 (HA6)	92	105 (HA9)	93 (HA11)
5/16 Whit.	94 (H13)	212 (HA17)	213	214 (HA21)	96 (HA25)
⅜ Whit.	73 (H32)	215 (HA36)	216	217 (HA42)	218 (HA46)
½ Whit.	68 (H50)	218X (HA54)	219	69 (HA58)	220 (HA62)
¼ Brass	51	222	52	223	53
5/16 Brass	140 (H14)	180 (HA18)	280	120 (HA22)	260 (HA26)
6MM	224 (H161)	225 (HA167)	226 (HA168)	227 (HA166)	228 (HA165)
8MM	181 (H15)	228X (HA19)	211	229 (HA23)	221 (HA27)
10MM	351	230	361	231	331
¼ U.N.F.	185 (H185)	186 (HA186)	187 (HA187)	188 (HA188)	189 (HA189)
5/16 U.N.F.	190 (H190)	191 (HA191)	192 (HA192)	193 (HA193)	194 (HA194)
⅜ U.N.F.	195 (H195)	196 (HA196)	197 (HA197)	198 (HA198)	199 (HA199)

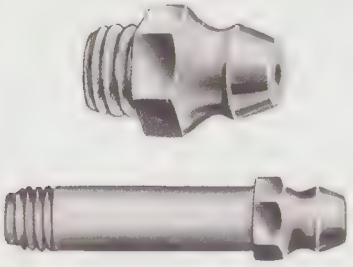
HYDRAULIC NIPPLES — DRIVE IN



Drive Diameter	Straight	35° Angle	45° Angle	67½° Angle
1/8"	1736			
3/16"	66 (H143)			
3/16"	66BC *			
1/4"	44 (H77)	234 (HA81)	235	
1/4"	44BC (H78)			70 (HA86)
5/16"	6 (H80)	232 (HA84)	233	
5/16"	6BC * (H79)			20H (HA140)

*Ball Check.

HYDRAULIC NIPPLES — SCREWED



FLUSH TYPE

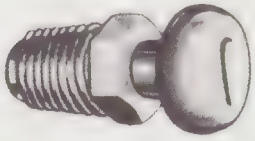
Thread	Part Number
1/8 B.S.P.	742 (Z742A)
1/4 B.S.P.	741 (Z741A)
1/8 N.P.T.	742B

LONG SERIES — SHORT SERIES

Thread	Length Overall	Part Number
1/4 S.A.E.	1 1/4"	90 (V1020)
1/4 S.A.E.	1 1/8"	901 (H127)
1/4 S.A.E. (Tie rod)	3/8"	99 (H123)
1/4 B.S.F.	1 1/4"	900 (H113)
1/4 B.S.F.	2 5/32"	902 (H145)
1/8 B.S.P.	1 1/4"	500
1/8 B.S.P. (Short)	5/8"	5S
1/8 B.S.P.	1 7/8"	55
1/8 B.S.P.	3 1/16"	555
1/8 Briggs (N.P.T.)	1 1/4"	500B (H110)
1/8 Briggs (N.P.T.)	1 7/8"	55B
1/8 Briggs (N.P.T.)	3 5/16"	555B

BREATHERS — Unrestricted Type

BRASS BODY



Thread	Part No.
1/8 B.S.P./N.P.T.	61 x 1/8
1/4 B.S.P./N.P.T.	61 x 1/4
3/8 B.S.P./N.P.T.	61 x 3/8
1/2 B.S.P./N.P.T.	61 x 1/2
3/4 B.S.P./N.P.T.	61 x 3/4

RELIEF VALVES

HARDENED STEEL BODY

Thread	Relief Pressure	Part Number
1/8 B.S.P./N.P.T.	1/4-1 lb.	47200
1/8 B.S.P./N.P.T.	1-5 lb.	317400
1/8 B.S.P./N.P.T.	7 1/2-15 lb.	47640
1/8 B.S.P./N.P.T.	45-80 lb.	47100
1/8 B.S.P./N.P.T.	400-650 lb.	50500

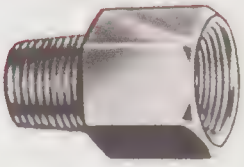
EXTENSIONS

Thread		Length	Part Number
Female	Male		
1/8 B.S.P.	1/2 Whit.	1″	30
1/8 B.S.P.	5/8 Whit.	2 1/4″	31
1/8 B.S.P.	5/8 Whit.	1 1/4″	32
1/8 B.S.P.	1/8 B.S.P.	1″	76 (4668/D)
3/8 B.S.F.	3/8 B.S.F.	1″	25
1/8 M.B.S.P.	1/8 M.B.S.P.	1 1/2″	28

PLUGS

Thread	Head	Part Number
1/8 B.S.P.	Hex.	71
1/8 N.P.T.	Hex.	71B
1/4 S.A.E.	Slotted	79
1/4 B.S.F.	Slotted	80
1/2 S.A.E.	Flush	64P x 1/2 S.A.E.
1/4 B.S.P.	Hex.	64P x 1/4 B.S.P.
1/4 N.P.T.	Hex.	64P x 1/4 N.P.T.

ADAPTORS

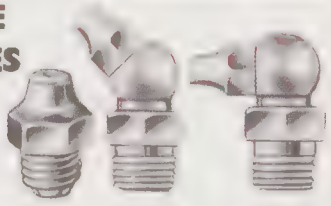


Thread		Part Number
Female	Male	
1/8 B.S.P.	1/4 B.S.P.	29 (5700/1)
1/4 B.S.P.	3/8 B.S.P.	47 (5700/23)
1/8 B.S.P.	3/8 B.S.P.	48 (5700/5)
1/8 N.P.T.	1/4 N.P.T.	29B
1/4 N.P.T.	3/8 N.P.T.	47B
1/8 N.P.T.	3/8 N.P.T.	48B

ELBOWS

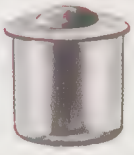
M. & F. Thread	Angle	Part Number
1/8 B.S.P.	90°	3/2 (A356)
1/8 B.S.P.	45°	4/2 (A683)
1/8 B.S.P.	85°	(AN85)
1/8 N.P.T.	90°	3/2B
1/8 N.P.T.	45°	4/2B
1/4 B.S.P.	90°	25 x 1/4
1/4 B.S.P.	45°	25 x 1/4

LOW PRESSURE GREASE NIPPLES



Thread	Straight	45 Angle	90 Angle
1/8 B.S.P.	15 (Z35A)	16 (Z387AA)	17
1/8 B.S.P. (Parallel)	15P (Z36AA)		
1/4 B.S.P.	23L (Z137A)		40L
1/4 B.S.F.	37 (P6)		
5/16 B.S.F.	18	42	43
3/4 B.S.F.	35L		
3/16 Drive	66L (P6D/F)		
1/4 Drive	67BC (Z68)		
5/16 Drive	19		

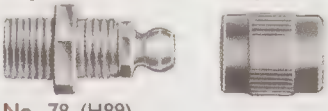
BALL OILERS



Size O.D.	3/16″	1/4″	5/16″	3/8″	7/16″	1/2″	5/8″
Part Number	600	601	602	603	604	605	606

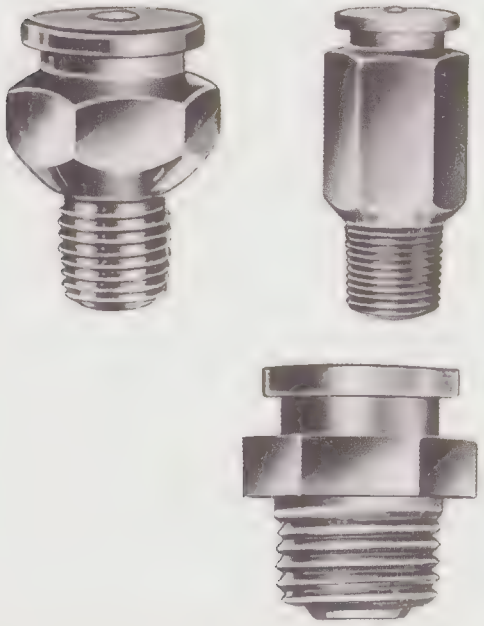
WATERPROOF HYDRAULIC NIPPLES

Completely Encased Brass Body.



1/8 B.S.P. No. 78 (H89)
1/8 N.P.T. No. 78B (H87)

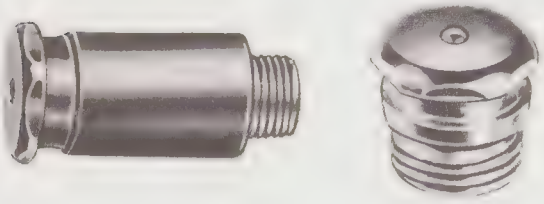
VOLUME GREASERS — STEEL, ZINC PLATED



Thread	Length	Part Number
$\frac{1}{8}$ B.S.P.	$\frac{3}{8}$″	63 (4788/1)
$\frac{1}{8}$ B.S.P.	$1\frac{1}{4}$″	630
$\frac{1}{4}$ B.S.P.	$\frac{3}{4}$″	62 (4785/13)
$\frac{1}{4}$ B.S.P.	$1\frac{1}{4}$″	61 (26871/1)
$\frac{1}{4}$ B.S.P.	Loco special	620
$\frac{3}{8}$ B.S.P.	$\frac{3}{4}$″	623 (4785/18)
$\frac{1}{8}$ B.S.P.	$1\frac{1}{4}$″	60 (26871/2)
$\frac{3}{8}$ B.S.P.	2″	74
$\frac{3}{8}$ B.S.P.	$1\frac{1}{4}$″	717
$\frac{5}{8}$ S.A.E.	$1\frac{1}{4}$″	75 (26871/8)
$\frac{1}{8}$ N.P.T.	$\frac{3}{4}$″	63B
$\frac{1}{8}$ N.P.T.	$1\frac{1}{4}$″	630B (26871/0)
$\frac{1}{4}$ N.P.T.	$\frac{3}{4}$″	62B
$\frac{1}{4}$ N.P.T.	$1\frac{1}{4}$″	61B (26871/3)
$\frac{3}{8}$ N.P.T.	$\frac{3}{4}$″	623B
$\frac{3}{8}$ N.P.T.	$1\frac{1}{4}$″	60B (26871/4)
$\frac{3}{8}$ N.P.T.	$1\frac{1}{2}$″	600B
$\frac{3}{8}$ N.P.T.	2″	74B (26871/5)
$\frac{1}{2}$ N.P.T.	$1\frac{1}{4}$″	717B (26971/7)

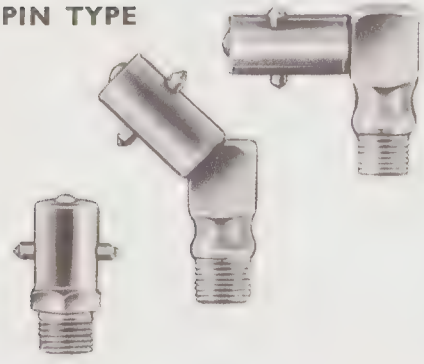
HEXAGON HEAD GREASERS

Brass — Nickel Plated



Thread	Part Number
$\frac{3}{8}$ B.S.F.	22 (25072)
$\frac{3}{8}$ B.S.F. (Long body)	340
$\frac{1}{4}$ B.S.P.	27 (25073)
$\frac{1}{2}$ B.S.F.	49 (25075)
$\frac{1}{8}$ B.S.P.	28 (25067)
$\frac{1}{8}$ B.S.P. (Long body)	34 (25082)
$\frac{5}{16}$ Drive	89
$\frac{5}{16}$ B.S.F.	107 (25015)

PIN TYPE



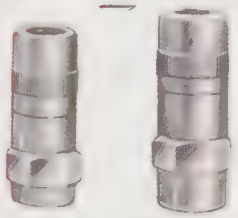
Thread	Straight	45° Angle	90° Angle
$\frac{1}{8}$ B.S.P. (Hexagon)	No. 1 (4601/3A)		
$\frac{1}{8}$ B.S.P. (Plain)	No. 2	No. 4	No. 3
$\frac{1}{4}$ B.S.P.	No. 2/29	No. 4/29	No. 3/29
$\frac{3}{8}$ B.S.P.	No. 2/48	No. 4/48	No. 3/48

ASSORTED NIPPLES IN METAL BOXES

Part Number	Quantity
72 (V4649)	72 Nipples
144 (V4650)	144 ,,
288 (V4651)	288 ,,

NIPPLE CONNECTORS

HYDRAULIC
Slim $\frac{9}{16}$″ Standard $\frac{5}{8}$″ Special $\frac{11}{16}$″



No. T5625 No. H9491 No. T55

BAYONET Connector Pin Type

No. 25778/AU

ZERC Low pressure Tecazerc

No. 6410/AU

FLUSH Adaptors for Recessed

No. 314150

TAT Hook-on or Industrial

TAT Thrust-on Round Head

TAT—Round Head Interchangeable
HF 4016 HF 4063

VOLUME Giant Button Head

HF 4020 (V210)

HEAD INDENTIFICATION

HYDRAULIC

PIN TYPE

ZERC

FLUSH

TAT

INDUSTRIAL ROUND HEAD

GIANT BUTTON HEAD

GUN PARTS

FIXED EXTENSION PIECE BENT

With Wing Nut for easy adaption
$\frac{1}{8}$ B.S.P. Suits all guns
$\frac{1}{8}$ B.S.P. Ends
Part Number HG4112

NYLON FLEXIBLE CONNECTOR

$\frac{1}{8}$ B.S.P. Ends
10″ Long
Part Number T400

BRAIDED RUBBER CONNECTOR

$\frac{1}{8}$ B.S.P. Ends

25735/8 8″
T25735/10 10″
R 4000 11″

STRAIGHT EXTENSION PIECES

To suit all guns
$\frac{1}{8}$ B.S.P. Both ends

Part Number	T2-19	T2-23	T2-24	T2-25	T2-27
Length	2″	4½″	7″	9″	12″

ONE BALL JOINT FLEXIBLE CONNECTOR

$\frac{1}{8}$ B.S.P. Ends
Part Number T100

TWO BALL JOINT FLEXIBLE CONNECTOR

$\frac{1}{8}$ B.S.P. Ends
Part Number T200

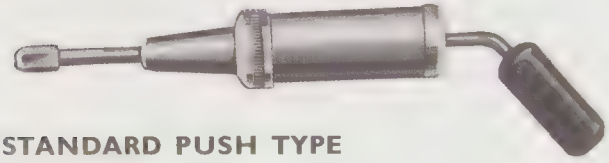
THREE BALL JOINT FLEXIBLE CONNECTOR

$\frac{1}{8}$ B.S.P. Ends
Part Number T300

GREASE GUNS

HIGH PRESSURE SCREW DOWN

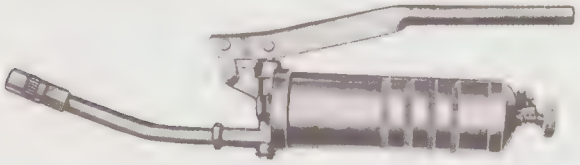
(1) Develops 5,000lb. P.S.I. — 4 SD/H 10oz.
(2) Ideal for high power greasing with very heavy lubricants. — 3 SD/H 8 oz.



STANDARD PUSH TYPE

Develops 5,000lb. P.S.I.
Easy one-hand operation.
Ideal for tool kits, farm or light machinery.

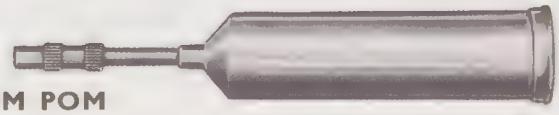
Standard Model 4 oz. L.P.
Standard Model 4 oz. HYD



LEVER GREASE GUN

Improved conventional action, for high pressure application.
Lubricating pressures up to 10,000lb. P.S.I.
Fitted with hydraulic connector.

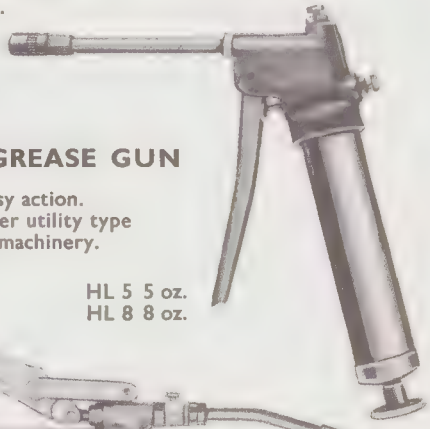
TL 12
TL 14
TL 16
TL 20
TL 26
TL 32



POM POM

Develops 5,000lb. P.S.I.
Services hard to reach nipples.
Ideal machinery gun.

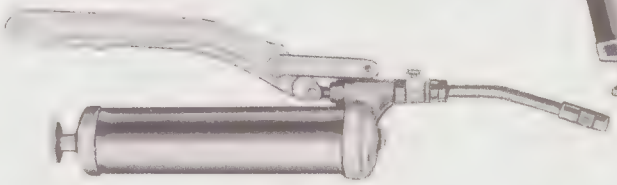
13550/H 4 oz. (Hydraulic connector)



HAND LEVER GREASE GUN

One hand, quick easy action.
Suitable for passenger utility type vehicles—also light machinery.

HL 5 5 oz.
HL 8 8 oz.

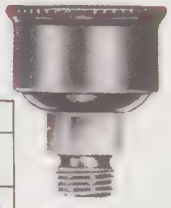


SUPER LEVER GREASE GUN

Improved toggle action for high pressure, with minium effort.
Lubricating pressures up to 10,000lb. P.S.I.
Oil or grease filling plug.

SL 12
SL 14
SL 16
SL 20
SL 26
SL 32

L1567 GREASE CUPS



Size	1	2	3	4	5	6	7	8
Capacity in oz.	⅛	¼	½	¾	1	1½	2½	3
Diameter	¾	⅞	1¼	1⅝	2	2⅜	2¾	3½

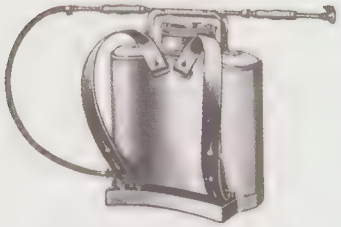
DRUM PUMPS are shown on page 101

L1568 LUBRICATORS

SIGHT FEED — Glass Body

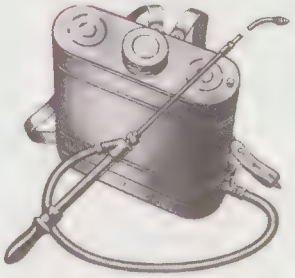
No.	0	1	1½	2	3	4	5	6
Glass Diam.	1¼″	1½″	1¾″	2″	2¼″	2½″	3″	3½″
Glass Length	1⅛″	1⅜″	1⅝″	1⅞″	2⅛″	2⅜″	3″	4″
Capacity oz.	⅝	1	1½	2½	4	5	10	18
B.S.P. Thread	⅛″	¼″	¼″	⅜″	⅜″	⅜″	½″	½″

L1569 FIRE FIGHTING OUTFIT



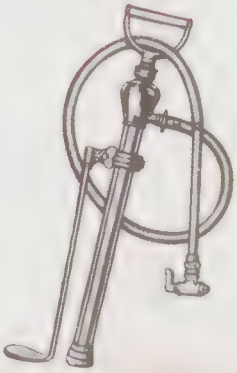
Capacity 3 Gals. Hose 30″
Fitted with No. 8 Bushfire "Bordeaux" Nozzle, Sprays 14 ft.

L1570 JUNIOR KNAPSACK



Capacity 1½ Gals. Hose 48″,
2 Brass Extensions, No. 6 Nozzle.

L1571 BUCKET PUMP



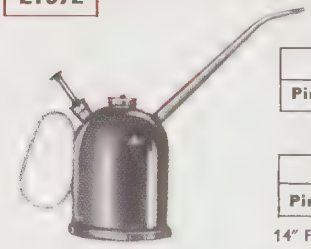
Available in 2 Models

Hose 36″, 9″ Director Fitted with No. 5 "Bordeaux Nozzle";

Hose 48″, 12″ Director Fitted with No. 12 Allway Nozzle.

OIL CANS

L1572 UPRIGHT FORCE-FEED



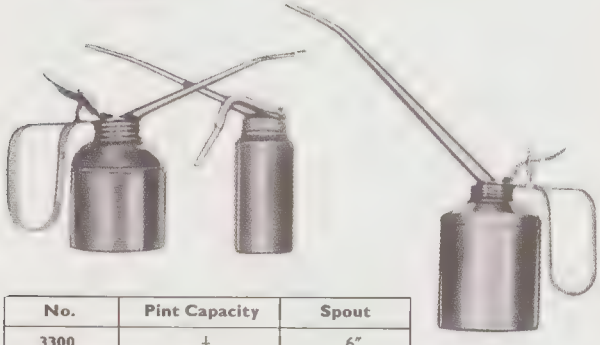
FIXED SPOUT

No.	030	031	032
Pint Capacity	½	¾	1

DETACHABLE SPOUT

No.	033	034	035
Pint Capacity	½	¾	1

14″ Flexible Spout — 036



No.	Pint Capacity	Spout
3300	¼	6″
3320	½	6″
3340	1	9″
60	2	11″

L1573 HORIZONTAL VALVE AND FORCE-FEED

VALVE FEED Fixed Spout

No.	07	08	09	010
Pint Capacity	½	¾	1	1½

VALVE FEED Detachable Spout

No.	013	014	015	017
Pint Capacity	½	¾	1	2

FORCE FEED Fixed Spout

No.	018	019	020	021	022
Pint Capacity	¼	½	¾	1	1½

FORCE FEED Detachable Spout

No.	025	026	027	029
Pint Capacity	½	¾	1	2

L1574 BENCH TYPE VALVE-OILER

No. 4 2¾ oz. 1″ Spout

No. 3C 7″ Flexible Spout 5 oz. Capacity

No. 3D 3″ Spout 5 oz. Capacity

No. 3B 5″ Spout 5 oz. Capacity

L1575 OIL FILLER

Type	038	039	040
Capacity—Pints	2	3	4

OIL MEASURE

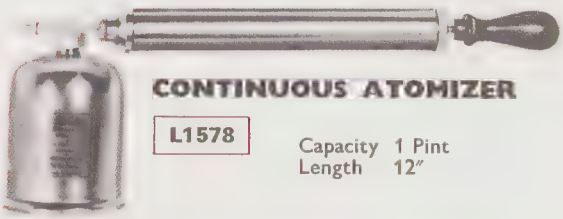
L1576

1 Pint
¼ Gal.
½ Gal.
1 Gal.
2 Gal.

OIL BOTTLE

L1577

Capacity ½, 1 and 2 Gallons



CONTINUOUS ATOMIZER

L1578

Capacity 1 Pint
Length 12″

L1579 PETROL FUNNELS WITH STRAINER

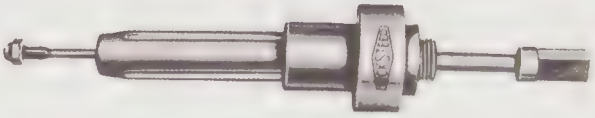
4″ 6″ 8″ and 10″ diameter

L1580 OIL SYRINGE

Capacity ½ Pint
Length 12″ Diameter 1½″

TUBE EXPANDERS

CONDENSER AND HEAT EXCHANGER TUBE EXPANDERS



WICKSTEED TYPE C800 Self-feeding with Adjustable Collar

WICKSTEED TYPE C1200
Self-feeding with Adjustable Collar and Long Reach
Size of Tube O.D. ½″ to 1½″, I.D. .344″ to 1.446″

Type C800. Self-feeding with Adjustable Collar

C800 Model has rollers having a gradual radius on the front end to prevent the formation of a sharp ridge inside the tube, and embodies the following features:—

Adjustable Thrust Collar
To prevent friction between the tool and tube end a ball bearing thrust race is employed which considerably reduces wear and the effort required to turn the tool. This Bearing Housing is so designed that not only is the tube prevented from protruding too far from tube sheet, but also protects the tube end from scuffing and burring.

Self-feeding and Parallel Rolling
Gives a uniform gradual expansion and tightness of the tube throughout the full thickness of the tube sheet.

Range Covering Tube Sheet Thickness

Using 1¼ in. (38.10 mm.) long Rollers—
Range, including Roller radius, from ½ in. to 1½ in. (12.7 mm. to 38.10 mm.)

Using 2¼ in. (57.15 mm.) long Rollers—
Range, including Roller radius, from 1¼ in. to 2¼ in. (31.75 mm. to 57.15 mm.)

Code Number
This is stamped on every Expander and should be quoted when ordering. State also the O.D. of Tube and Gauge.

THE WICKSTEED ELECTRONIC AUTOMATIC TORQUE CONTROL TUBE EXPANDING UNIT

MOTORS
"M" type weighs 10½ lbs. for ferrous tubes, ⅜″ o/d to 1″ o/d and non-ferrous tubes ½″ o/d to 1¼″ o/d. Two speeds 450 r.p.m. 1050 r.p.m.
"S.M." Heavy Type weighs 12 lbs. for ferrous tubes ⅜″ o/d to 2″ o/d and non-ferrous tubes 1″ o/d to 2½″ o/d. Two speed 175 r.p.m. and 75 r.p.m.
"M" type & "S.M." type drills are mechanically different, but are identical electrically and use the same circuit in the control unit.
Electric Supply Single phase 220/240 volts A.C., 40/60 cycles, 13/15 amps supply is adequate.

STANDARD EQUIPMENT
Includes:
Ammeter, Automatic voltage variation compensation, mains warning and polarity indicator light, Automatic supply voltage range selection Motor drill unit with quick release chuck, cable and plug. Spare fuses and mains — input cable with plug (Unit end only). Probe lamps supplied as an extra.

GENERAL CARE AND MAINTENANCE OF EXPANDERS

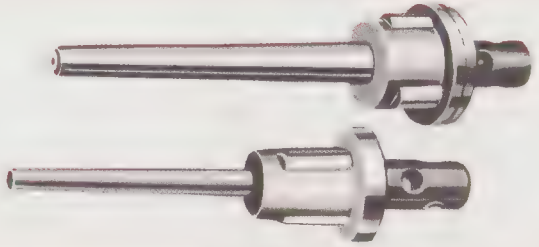
Service life of expanders is affected by speed at which they rotate. Excessive speed of roller rotation generates heat and creates flaking. Expanders should be kept clean and well lubricated, preferably with soluble type oil or grease before storage. Replace damaged mandrels and roller.

When ordering Tube Expanders
Please quote
(1) Size of tube, O.D.
(2) Minimum I.D. of tube.
(3) Thickness of tube plate — Length of expansion.

Dimension details of B.T.M. Steel Tube — Page 113.

BOILER TUBE EXPANDER

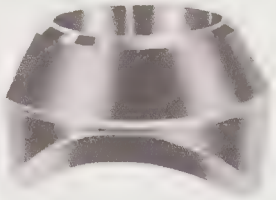
3 Roller Type, complete with Mandrill, Tommy Bar.
Self Releasing. Self Feeding. Sizes to suit Standard Boiler Tube.

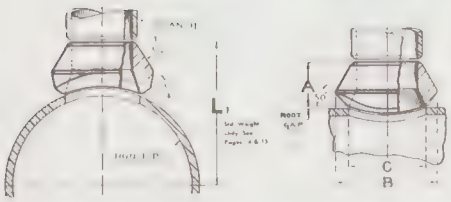


BONNEY FORGE WELDING FITTINGS

ASTM A105 GRADE II

WELDOLETS

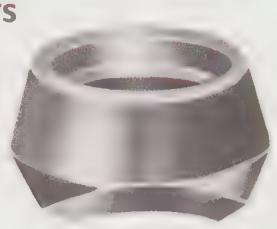


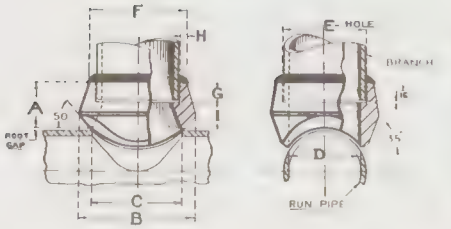


*Nominal Line Pipe Size—Inches	Outlet Size—Inches	A	B	C
1¼ to 36	1	1 1/16	2 1/8	1 7/16
1½ to 36	1¼	1¼	2 9/16	1¾
2 to 36	1½	1 5/16	2 7/8	2
2½ to 36	2	1½	3½	2 9/16
3 to 36	2½	1⅝	4 1/16	3
3½ to 36	3	1¾	4 13/16	3 11/16
4 to 36	3½	1⅞	5⅝	4 7/16
5 to 36	4	2	6	4¾
6 to 36	5	2¼	7 1/16	5 9/16
8 to 36	6	2⅜	8½	6 11/16
10 to 36	8	2¾	10⅜	8 11/16

Outlet Pipe Size	Line Pipe Sizes
1	2, 4–5, 6–10
1½	2, 3½–4, 6, 8–12
2	3, 4, 6, 8, 12–14
3	4, 6, 8, 12–14
4	6, 8, 12–14
6	8, 10, 12
8	10, 12

SOCKOLETS



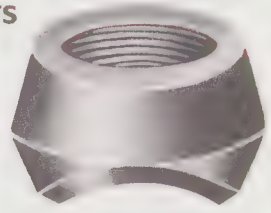


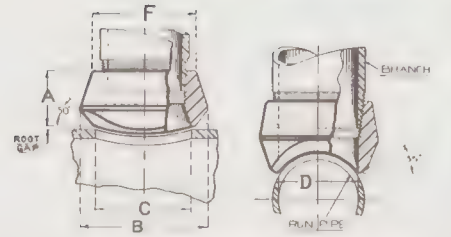
*Nominal Line Pipe Size—Inches	Outlet Size—Inches	A	B	C	D	E	F	G	H	I
¾ to 36	½	1	1⅜	1 5/16	.622	.855	1¼	7/16	13/64	9/16
1 to 36	¾	1 1/16	1¾	1 9/16	.824	1.065	1 7/16	½	3/16	9/16
1¼ to 36	1	1 5/16	2 1/8	1 7/16	1.049	1.330	1 13/16	17/32	¼	25/32
1½ to 36	1¼	1 5/16	2 9/16	1¾	1.380	1.675	2 3/16	19/32	¼	¾
2 to 36	1½	1⅜	2⅞	1	1.610	1.915	2 7/16	⅝	15/64	¾
2½ to 36	2	1½	3½	2 9/16	2.067	2.406	2 15/16	11/16	17/64	13/16

Outlet Pipe Size*	Line Pipe Sizes
½	2 2½, 3–8
¾	2–2½, 6–12
1	2, 4 5, 6–10
1½	2, 3–4, 8–12
2	3, 4

* Available to suit Schedule 40 or Schedule 80 inside Diameter.

THREDOLETS





*Nominal Line Pipe Size Inches	Outlet Size Inches	A	B	C	F
¾ to 36	½	1	1⅜	1 5/16	1¼
1 to 36	¾	1 1/16	1¾	1 3/16	1 7/16
1¼ to 36	1	1 5/16	2⅛	1 7/16	1 13/16
1½ to 36	1¼	1 5/16	2 9/16	1¾	2 3/16
2 to 36	1½	1⅜	2⅞	2	2 7/16
2½ to 36	2	1½	3½	2 9/16	2 15/16

N.P.T. (Female) Outlet	Line Pipe Sizes
½	2–2½, 3–8
¾	2–2½, 6–12
1	2, 4–5, 6–10
1¼	2, 8
1½	2, 3–4, 8–12
2	3, 4, 5, 6, 8–10, 12–18

DEUBLIN DOUBLE-PURPOSE UNIONS

Rotating Joints for Water and Steam Service to 350° F.

OPERATING DATA: Maximum pressure, 120 p.s.i. (steam). Maximum speed, 1500 r.p.m. (Models 055, and 255); 1000 r.p.m. (Models 355, 525 and 555). Higher speeds can be attained through use of piloted rotors, which give close concentricity between union and shaft.

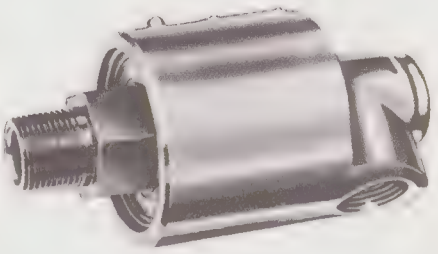
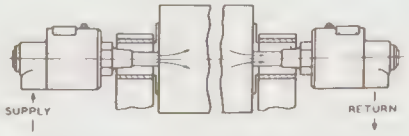
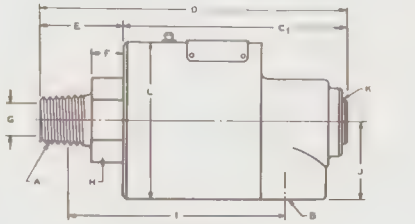


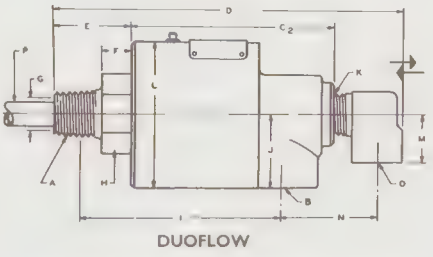
Diagram shows Double Purpose Union arranged for Monoflow operation. Removal of Monoflow plug and substitution of siphon pipe and elbow permits use in Duoflow operation.



Model	Size	A Rotor Thread	B Pipe Tap	D	D′	E	F	G Rotor Hole	J	K Pipe Tap	L	O Pipe Tap	P Pipe Size
055	3/8	3/8 R.H. PIPE 3/8 L.H. PIPE	3/8	3 1/16	4 3/16	1	3/8	3/8	7/8	1/4	1 3/4	1/4	.250 tube
155	1/2	1/2 R.H. PIPE 1/2 L.H. PIPE	1/2	4 3/16	5 5/16	1 7/16	9/16	1/2	1 1/8	3/8	2 1/4	3/8	1/8
	1/2	1/2 R.H. PIPE 1/2 L.H. PIPE	1/2	5 1/2	6 3/16	1 7/16	9/16	1/2	1 7/16	1/2	2 7/8	1/2	1/8
255	3/4	3/4 R.H. PIPE 3/4 L.H. PIPE	3/4	5 1/2	6 3/16	1 7/16	9/16	11/16	1 7/16	1/2	2 7/8	1/2	1/4
	3/4	1-14 R.H. 1-14 L.H.	3/4	5 3/8	6 11/16	1 5/16	9/16	5/8	1 7/16	1/2	2 7/8	1/2	1/4
355	1	1 R.H. PIPE 1 L.H. PIPE	1	6 11/16	9 1/8	1 15/16	3/4	1	1 5/8	3/4	3 1/4	1/2	3/8
525	1 1/4	1 1/4 R.H. PIPE 1 1/4 L.H. PIPE	1 1/4	7 9/16	9 1/4	2 5/16	1 1/8	1 1/4	1 13/16	1	3 5/8	3/4	1/8
	1 1/4	1 1/4 R.H. PIPE 1 1/4 L.H. PIPE	1 1/4	8 1/2	10 3/8	2 1/2	1 9/32	1 1/4	2 1/8	1 1/4	4 1/4	3/4	1/2
	1 1/4	1 1/4-12 R.H.	1 1/4	9 1/8	11	3 1/8	2 5/16	1 1/4	2 1/8	1 1/4	4 1/4	3/4	1/2
555	1 1/2	1 1/2 R.H. PIPE 1 1/2 L.H. PIPE	1 1/2	8 1/2	10 3/8	2 1/2	1 9/32	1 1/2	2 1/8	1 1/4	4 1/4	3/4	1/8
	1 1/2	2-12 R.H.	1 1/2	8 3/4	10 5/8	2 3/4	1 11/16	1 1/2	2 1/8	1 1/4	4 1/4	3/4	1/8

*NOTE: Siphon Pipe Sizes Are Shown Above. Duoflow Elbows To Accommodate Various Size Tubing Are Available.



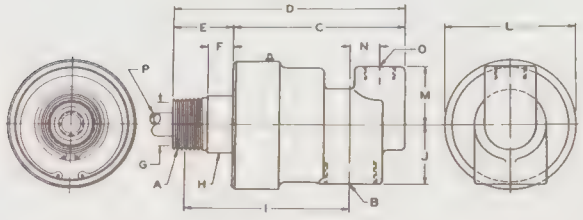


ALTERNATE DUOFLOW ELBOWS

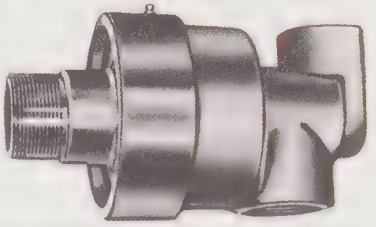
Model	Size	Siphon	
		Pipe	Tube
155	1/2 UNION	1/8 N.P.T.	3/8 O.D.
	1/2 UNION	1/8 N.P.T.	3/8 O.D.
255	3/4 UNION	1/4 N.P.T.	7/16 O.D.
		1/8 N.P.T.	3/8 O.D.

DEUBLIN 2½-INCH CAPACITY DOUBLE-PURPOSE UNION

Maximum Steam Pressure 100 p.s.i.
Maximum Speed 750 r.p.m.



This stubby, large-capacity union for Monoflow or Duoflow operation requires only 4 ft.-lbs. of torque at 100 p.s.i. of pressure.



Model	A Rotor Thread	B Pipe Tap	D	E	F	G Rotor Hole	J	L	O Pipe Tap	P Pipe Size
755	2½ R.H. PIPE 2½ L.H. PIPE	2½	12 3/8	3¼	1⅜	2⅜	3 3/16	7	1¼	1

DREADNOUGHT Series 1 and 2 GLOBE STOP VALVES—BRONZE

For Steam Water Air and Oil

Bronze Body and Cover Manganese Bronze Spindle.
Superstron 40 Valve and Seat. Ball Held Valve.
Straight or Angle Pattern Screwed or Flanged Ends.
Inside Screw or Outside Screw.

FIG. 1

FIG. 1A

FIG. 2

FIG. 2A

FIG. 1F

FIG. 1AF

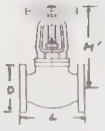


FIG. 2F

FIG. 2AF

MAXIMUM WORKING PRESSURE
300lbs. per. Sq. in. at 550°F, 500lbs. per. Sq. in. at 200°F.

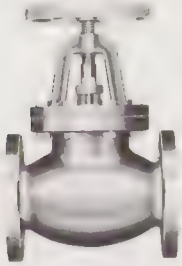
DIMENSIONS INCHES

Nom. Size	L	E	F	H Valve Open	H' Valve Open
¼, ⅜, ½	3¼	1 9/16	1½	5⅜	6⅜
¾	3⅜	1½	1½	6¼	7¼
1	4⅛	2⅛	2⅛	6¾	7⅜
1¼	5⅛	2⅜	2⅜	8¼	8
1½	6	2¾	2⅜	8¼	8
2	7	3 1/16	3	8⅜	9⅛
2½	8¼	3⅞	3⅜	11¼	11⅛
3	10	4⅜	4⅜	11¼	13½

Nom. Size	L	E	F	H Valve Open	H' Valve Open	D	T
½	3¾	2⅞	2⅞	5⅜	6⅜	4½	½
¾	4½	2 15/16	2 15/16	6¼	6¼	4½	½
1	4⅞	3	3¼	6¾	7⅜	4½	9/16
1¼	5½	3⅜	3½	8¼	8	5¼	11/16
1½	5⅞	3 11/16	3 11/16	8¼	8	5½	11/16
2½	7	4	4½	8⅜	9½	6½	¾
2½	9	4⅜	4⅜	11¼	13½	7½	¾
3	10½	5½	5½	11¼	13½	8	⅞

DREADNOUGHT Series 3 BOLTED COVER GLOBE and CHECK VALVES—BRONZE

For Steam Water Air and Oil to BS 2060



Bronze Body and Cover Manganese Bronze Spindle.
Superstron 40 Valve and Seat Ball Held Valve.

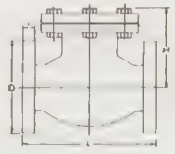


FIG. 103

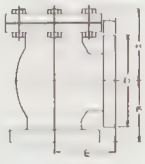


FIG. 103A

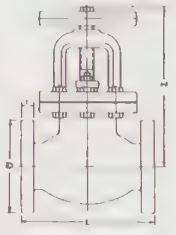


FIG. 3

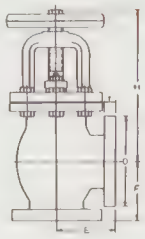


FIG. 3A

MAXIMUM WORKING PRESSURE
300lbs. per. Sq. in. at 550°F, 500lbs. per. Sq. in at 200° F

DIMENSIONS INCHES

Nom. Size	L	H Valve	H Open	D	T	E	F	A
½	6	8⅛	8⅛	4½	9/16	3	3	4
¾	6	8½	8½	4½	9/16	3	3	4
1	6⅜	9⅜	9⅜	4½	⅝	3	3½	4½
1¼	7⅛	10½	10½	5¼	11/16	3⅜	3½	4⅝
1½	7⅜	10½	10½	5½	11/16	3 11/16	3 11/16	4⅝
2	8½	11½	11½	6½	¾	4	4½	5½
2½	9½	12½	12½	7¼	¾	4⅜	4⅜	5⅝
3	10½	14¾	14¾	8	⅞	5½	5½	6¼
4	13	17½	16½	9	1	6½	6	7¾

DREADNOUGHT SAFETY VALVES—BRONZE

For Steam Water Air and Oil

Body Forged Manganese Bronze.
Valve and Seat Stainless Steel.

Fig. 521 Screwed Side Outlet Easing Gear
Fig. 521F Flanged Side Outlet Easing Gear
Fig. 521R Screwed Side Outlet Sealed Cap
Fig. 521 FR Flanged Side Outlet Sealed Cap
Fig. 531 Screwed Atmospheric Outlet Easing Gear
Fig. 531F Flanged Atmospheric Outlet Easing Gear
Sizes: ½" x ¾", ¾" x 1"

MAXIMUM WORKING PRESSURE
250lbs. per. Sq. in

DREADNOUGHT SLEEVE PACKED WATER GAUGE MOUNTS

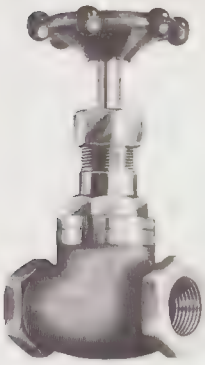
For Steam Boilers

Bronze throughout. Polished or Mat Finish for ½" diameter Boiler Glass.

Fig. 130 Screwed ¾" B.S.P.
Fig. 130F Flanged.

DREADNOUGHT Series 21 GLOBE and CHECK VALVES—BRONZE

To British Standard Specification BS2060



Bronze Body and Cover. Manganese Bronze Spindle.
Superstron 40 Valve and Seat. Ball Held Valve.

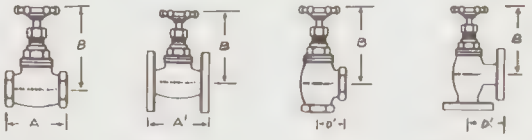


FIG. 21 FIG. 21F FIG. 21A FIG. 21AF

DIMENSIONS INCHES

Size	A	A'	B	B'	C	D	D'	E
½	3	4	5 7/16	6 7/16	2½	1½	3½	2½
¾	3½	4½	5½	6½	2½	1½	3½	2½
1	4⅛	5	6½	7⅜	2⅜	2 1/16	3½	2⅜
1¼	4⅝	5½	6 13/16	8⅜	2 7/16	2⅜	3⅝	2 13/16
1½	5½	6	7⅞	9⅞	3	2½	4	3
2	6½	7	8 1/16	10¼	3 7/16	3⅜	4½	3 7/16
2½	9	9	11 7/16	12⅛	4½	3⅜	4½	4 7/16
3	10	10	12⅛	13	5¼	4½	5½	4 13/16

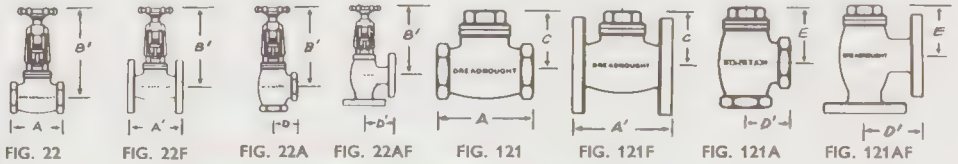
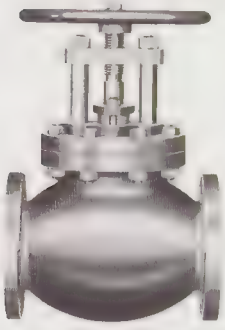


FIG. 22 FIG. 22F FIG. 22A FIG. 22AF FIG. 121 FIG. 121F FIG. 121A FIG. 121AF

MAXIMUM WORKING PRESSURE

300lbs. per. sq. in. up to 550°F. 500lbs. per. sq. in. up to 200°F.
All Fig. 21 Series Globe Valves are available as controllable Lift Check Valves. When ordering please add CL to Fig. No.

DREADNOUGHT Series 1000 GLOBE VALVES—IRON, STEEL and BRONZE



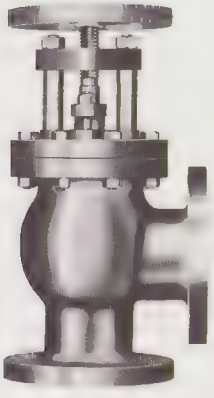
For Steam Water Air and Oil

Available in the following patterns:

CAST MEEHANITE—BRONZE TRIM

Fig. 1000. Straight Pattern Globe. Flat faced seating, and Fig. 1040 as Controllable Lift Check.
Fig. 1001. Straight Pattern Globe. Pintle guided seating and Fig. 1041 as Controllable Lift Check.
Fig. 1000A. Right Angle. Flat faced seating and Fig. 1040A as Controllable Lift Check.
Fig. 1001A. Right Angle. Pintle guided seating and Fig. 1041A as Controllable Lift Check.

Manganese Bronze Spindle. Bronze Valve & Seat. Ball held Valve.



CAST STEEL—SUPERSTRON 40 TRIM

Fig . 1100. Straight Pattern Globe. Flat faced seating, and Fig. 1140 as Controllable Lift Check.
Fig. 1101. Straight Pattern Globe. Pintle guided seating and Fig. 1141 as Controllable Lift Check.
Fig. 1100A. Right Angle. Flat faced seating and Fig. 1140A as Controllable Lift Check.
Fig. 1101A. Right Angle. Pintle guided seating and Fig. 1141A as Controllable Lift Check.

Superstron 40 Spindle Valve & Seat. Ball held Valve.

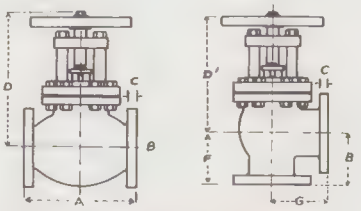
CAST BRONZE—SUPERSTRON 40 TRIM

Fig. 1200. Straight Pattern Globe. Flat faced seating and Fig. 1240 as Controllable Lift Check.
Fig. 1201. Straight Pattern Globe. Pintle guided seating and Fig. 1241 as Controllable Lift Check.
Fig. 1200A. Right Angle. Flat faced seating and Fig. 1240A as Controllable Lift Check.
Fig. 1201A. Right Angle. Pintle guided seating and Fig. 1241A as Controllable Lift Check.

Manganese Bronze Spindle.
Superstron 40 Valve & Seat. Ball held Valve.

DIMENSIONS INCHES

Size	A	B	C	D	D'	F	G
2	8½	6½	¾	11½	11½	4	4½
2½	9½	7½	¾	14⅛	12½	4⅝	5
3	10½	8	⅞	16⅛	14½	5½	5½
4	13	9	1	18¾	16½	6	6½
5	15	11	1⅛	20	17	7	7½
6	17	12	1⅛	22⅞	19¾	8	8½
8	21	14½	1¼	25½	24¾	9½	9½
10	25	17	1⅜	28	25	12	12
12	32	19¼	1½	37¼	28	12	12



MAXIMUM WORKING PRESSURE

Fig. 1000. Cast Meehanite Grade G.D.—150 p.s.i. at 400°F cold rating 300 p.s.i.
Fig. 1100. Cast Steel—250 p.s.i. at 800°F.
Fig. 1200. Cast Bronze—300 p.s.i. at 500°F.
All ratings to A.S.B. 190

Colour Coding.

Meehanite Valves are painted GREY
Cast Steel Valves are painted RED
S.G. Iron Valves are painted BLUE
Available in S.G. Iron Body Material

DREADNOUGHT Series 600 GATE VALVES — BRONZE

For Water Oil and Gas

Bronze Body and Cover.
Manganese Bronze Spindle Bronze Parallel Face Split Disc Valve.

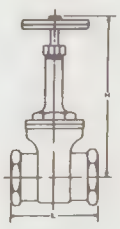


Fig 601

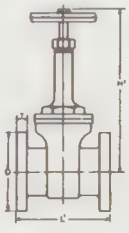


Fig. 601F

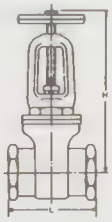


Fig. 602

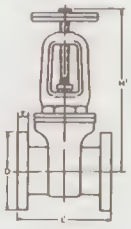


Fig. 602F

DIMENSIONS INCHES

Size	L	L'	H	H'	D	T
1	3¼	4½	8½	9½	4¾	7/16
1¼	3¾	5¼	10¾	10¾	5¼	11/16
1½	4⅛	5½	11⅛	11	5½	11/16
2	4⅝	6½	12⅝	13½	6½	¾
2½	6¼	7	15½	16	7½	¾
3	7	8½	17	17⅝	8	⅞
4		9*	22*	23*	9*	1*

MAXIMUM WORKING PRESSURE
250lbs. per Sq. in.

DREADNOUGHT SOLID WEDGE GATE VALVES

IRON, CAST STEEL or BRONZE

Body and Cover Meehanite, Steel or Bronze.

Spindle Manganese Bronze or Superstron 40.

Wedge Cast Bronze or Steel Sizes Over 4" Bronze or Superstron 40 Rings.

Seats, Screwed in Seat Rings Bronze or Superstron 40.

MAXIMUM WORKING PRESSURES

Fig. 1090 Inside Screw Spindle—1091 Outside Screw Spindle—CAST MEEHANITE Grade G.D.—150 P.S.I. at 400°F. Cold Rating 300 P.S.I.

Fig. 1190 Inside Screw Spindle—1191 Outside Screw Spindle—CAST STEEL—300 P.S.I. at 800°F.

Fig. 1290 Inside Screw Spindle—1291 Outside Screw Spindle—CAST BRONZE—300 P.S.I. at 550°F.

*All ratings to A.S.B. 190.

Colour Coding

Meehanite Valves are painted GREY.

Cast Steel Valves are painted RED.

Available With "Flexiseal" Seating, Suffix Fig. No. FT

DIMENSIONS INCHES

Size	A	B	C	D	D'
1½	6½	5½	11/16	10	14½
2	7	6½	¾	11 7/16	17 7/16
2½	7½	7¼	¾	11⅞	17 11/16
3	8	8	⅞	14⅜	21 7/16
4	9	9	1	15½	24 7/16
5	10	11	1⅛	19⅞	31¼
6	10½	12	1⅛	21¼	33⅜
8	11½	14½	1½	27	41⅞
10	13	17	1⅜	29½	50
12	14½	19¼	1½	32¼	54⅝

Fig. 1090 C.I.
Fig. 1190 C.S.

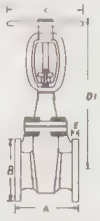


Fig. 1091 C.I.
Fig. 1191 C.S.

DREADNOUGHT "FLEXISEAL" PARALLEL SLIDE VALVES

CAST IRON, CAST STEEL or CAST BRONZE

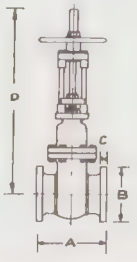
Body and Cover Meehanite, Steel or Bronze.

Spindle Manganese Bronze or Superstron 40.

Valve and Seat "Flexiseal" Discs Bronze or Superstron 40.

MAXIMUM WORKING PRESSURE

Fig. 1080 Cast Meehanite Grd. G.D. 150lb. per sq. in up to 400°F.
Fig. 1180 Cast Steel 250lb. per sq. in. up to 800°F.
Fig. 1280 Cast Bronze 300lb. per sq. in. up to 550°F.
Ratings to A.S.B. 190.



DIMENSIONS INCHES

Size	A	B	C	D
1½	7	5½	11/16	14⅛
2	10	6½	¾	17 7/16
2½	10¾	7¼	¾	17½
3	11½	8	⅞	19⅜
4	13	9	1	24⅞
5	15	11	1⅛	30⅜
6	15½	12	1⅛	35⅞
8	17½	14½	1¼	42⅜
10	18	17	1⅜	50¼
12	20	19¼	1½	57

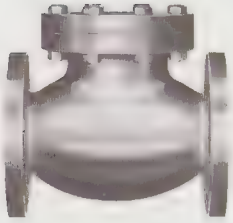
DREADNOUGHT CHECK VALVES—IRON, STEEL or BRONZE

Body and Cover Meehanite, Steel or Bronze.
Valve and Seat Bronze or Superstron 40 — Seats Screwed into Body.

Available in the Following Patterns:

CAST MEEHANITE—BRONZE TRIM

Fig. 1020. Straight Pattern Globe Check. Flat faced seating and Fig. 1040 as Controllable Lift Check.
Fig. 1021. Straight Pattern Globe Check. Pintle guided seating and Fig. 1041 as Controllable Lift Check.
Fig. 1020A. Right Angle. Flat faced seating and Fig. 1040A as Controllable Lift Check.
Fig. 1021A. Right Angle. Pintle guided seating and Fig. 1041A as Controllable Lift Check.



CAST STEEL—SUPERSTRON 40 TRIM

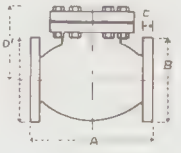
Fig. 1120. Straight Pattern Globe Check. Flat faced seating and Fig. 1140 as Controllable Lift Check.
Fig. 1121. Straight Pattern Globe Check. Pintle guided seating and Fig. 1141 as Controllable Lift Check.
Fig. 1120A. Right Angle. Flat faced seating and Fig. 1140A as Controllable Lift Check.
Fig. 1121A. Right Angle. Pintle guided seating and Fig. 1141A as Controllable Lift Check.

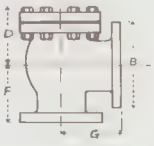
CAST BRONZE—SUPERSTRON 40 TRIM

Fig. 1220. Straight Pattern Globe Check. Flat faced seating and Fig. 1240 as Controllable Lift Check.
Fig. 1221. Straight Pattern Globe Check. Pintle guided seating and Fig. 1241 as Controllable Lift Check.
Fig. 1220A. Right Angle. Flat faced seating and Fig. 1240A as Controllable Lift Check.
Fig. 1221A. Right Angle. Pintle guided seating and Fig. 1241A as Controllable Lift Check.

DIMENSIONS INCHES

Size	A	B	C	D	D'	F	G
2½	9¼	7¼	¾	5¾	5⅛	4⅜	5
3	10½	8	⅞	6¼	5⅜	5½	5½
4	13	9	1	7½	6⅛	6	6½
5	15	11	1⅛	8⅜	7⅛	7	7½
6	17	12	1⅛	9 3/16	7 13/16	8	8½
8	21	14½	1¼	10½	10	9½	9½
10	25	17	1⅜	13	10⅛	12	12
12	32	19¼	1½	15¾	10¼	12	12

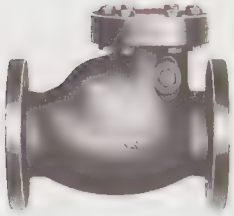




MAXIMUM WORKING PRESSURE

Fig. 1020. Cast Meehanite Grade G.D.
150lb. per sq. in up to 400°F.
300lb. per sq. in Cold.
Fig. 1120. Cast Steel
250lb. per sq. in. up to 800°F.
Fig. 1220. Cast Bronze
300lb. per sq. in. up to 550°F.
Ratings to A.S.B.190.

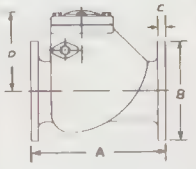
DREADNOUGHT SWING CHECK VALVE—IRON, STEEL or BRONZE



Body and Cover Meehanite, Steel or Bronze.
Valve Seat and Valve "Flexiseal" Disc Rings, Bronze or Superstron 40.

MAXIMUM WORKING PRESSURE

Fig. 1050. Cast Meehanite Grade G.D. 150lb. per sq. in up to 400°F. 300lb. per sq. in. Cold.
Fig. 1150. Cast Steel 250lb. per sq. in. up to 800°F.
Fig. 1250. Cast Bronze 300lb. per. sq. in. up to 550°F.
Ratings to A.S.B.190.

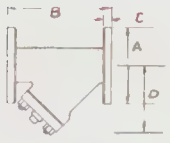


DIMENSIONS INCHES

Size	A	B	C	D
2½	10¼	7¼	¾	6⅛
3	10¼	8	⅞	6¼
4	13	9	1	7⅜
5	16	11	1⅛	9½
6	16	12	1⅛	9½
8	21	14½	1¼	11⅜
10	25	17	1⅜	13 7/16
12	27½	19¼	1½	14½

DREADNOUGHT Y-TYPE STRAINERS 450 Series

For Steam, Water, Oil or Gas.



Body Meehanite, Cast Steel or Bronze.
Strainer Woven Stainless Steel Mesh.

Fig. 450. Cast Iron Screwed. Size: 2".
Fig. 451. Cast Steel Screwed. Size: 2".
Fig. 452. Bronze Screwed. Size: 2".
Fig. 450F Cast Iron Flanged. Sizes: 2½"—10".
Fig. 451F Cast Steel Flanged. Sizes: 2½"—10".
Fig. 452F Bronze Flanged. Size: 2".

MAXIMUM WORKING PRESSURE

Cast Iron 150lb. per sq. in. up to 450°F 300lb. per sq. in. Cold.
Cast Steel 250lb. per sq. in. up to 800°F 350lb. per sq. in. Cold.
Bronze 300lb per sq. in. up to 550°F 350lb. per sq. in. Cold.

DIMENSIONS INCHES

Size	A	B	C	D
2	6½	9	¾	4¾
2½	7½	10½	¾	7
3	8	12½	⅞	7½
4	9	14	1	8¾
5	11	15	1⅛	11½
6	12	21	1⅛	13½
8	14½	24	1½	16
10	17	28	1⅞	19½

INGERSOLL-RAND PACKAGED AIR COMPRESSORS TYPE 30

Two stage Air Compressors provide

1. Reduced power consumption

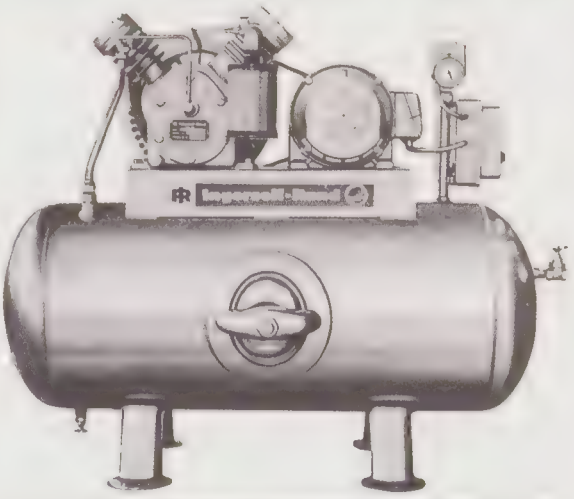
By cooling air between stages of compression 15% less horsepower is required for compression than with a single-stage machine of the same capacity.

2. Reduced valve maintenance

Two-stage compression effectively reduces discharge temperatures to less than ½ those reached in single-stage units. High air temperatures produce carbon build-up on valves; two-stage construction gives cooler running and longer valve life.

3. Longer compressor life

There are reduced working stresses on pistons, connecting rods, crankshaft and bearings. Superior balance is also achieved, thus reducing vibration. These features ensure a greatly increased life of the two-stage compressor over the single-stage unit.



STOP START CONTROL

Model	Bore	Stroke	Maximum Pressure	Piston Displ.	Motor H.P.	Receiver Size	Weight
*DB	2½″ & 2½″	1¼″	150 lb. per sq. in.	5·3 c.f.m.	1½	18″ x 36″	300 lbs.
D234	3″ & 1¾″	2¾″	150 lb. per sq. in.	11·2 c.f.m.	3	18″ x 36″	350 lbs.
D242	4″ & 2½″	2¾″	150 lb. per sq. in.	20·0 c.f.m.	5	18″ x 36″	400 lbs.
D253	5″ & 3″	3½″	150 lb. per sq. in.	28·0 c.f.m.	7½	18″ x 48″	550 lbs.
D64L	6″ & 3″	5″	150 lb. per sq. in.	40·2 c.f.m.	10	18″ x 48″	900 lbs.

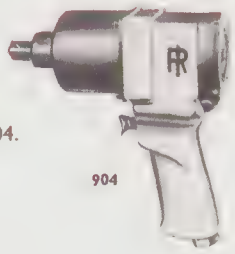
*Single stage compressor.

CONSTANT SPEED CONTROL

Model	Bore	Stroke	Maximum Pressure	Piston Displ.	Motor H.P.	Receiver Size	Weight
D64	6″ & 3½″	5″	150 lb. per sq. in.	52·4 c.f.m.	15	18″ x 48″	950 lbs.
D15T	5″ & 5″ & 3½″	4″	150 lb. per sq. in.	91·0 c.f.m.	20	18″ x 48″	1400 lbs.
D20T	5″ & 5″ & 4½″	4″	125 lb. per sq. in.	102·0 c.f.m.	25	18″ x 48″	1500 lbs.

AIR IMPACTOOLS

7/32″ to ¼″ bolt dia.	Models 5001B, 5028, 5020, 5040, 705, 904.
5/16″ to ¾″ bolt dia.	Models 5081, 908, 5100, 8100, 514.
¾″ to 2″ bolt dia.	Models 8341, 534, 8440, 538, 578.
Over 2″ bolt dia.	Models 582, 588, 599.



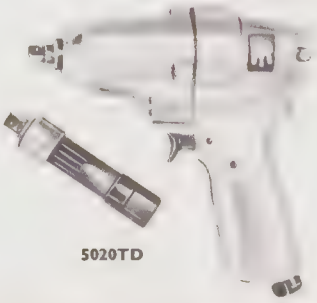
904

8341

AIR IMPACTOOLS — Torque Control

6 to 30 ft. lbs.	Models 5020T, 5020TD.
20 to 90 ft. lbs.	Models 5040T, 5040TD.
50 to 150 ft. lbs.	Models 5081TO, 5081TDO.
150 to 550 ft. lbs.	Model 534OTD.

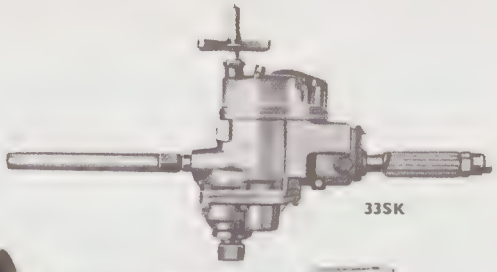
5040T



5020TD

AIR DRILLS Reversible and Non-reversible

$\frac{1}{4}$″ to $\frac{3}{8}$″ capacity	Models 000, 00, 1, D90.
$\frac{3}{8}$″ to $\frac{7}{8}$″ capacity	Models 1, 2, 22, D200.
1″ to 2″ capacity	Models 3, 33, 44.
Over 2″ capacity	Models 5, 55.


33SK

AIR GRINDERS

RADIAL WHEELS

$1\frac{1}{2}$″–2″–$2\frac{1}{2}$″ dia.	Models 110, 0, 15120.
4″ dia.	Model 15S60.
6″ dia.	Model 21S60.
8″ dia.	Model 31S45.

DISC WHEELS

7″ or 9″ dia.	Models 11F, 22F, 21FA, 42F.

CUP WHEELS

6″ dia.	Models 11F, 22F, 21FA, 42F.

SANDERS

7″ dia.	Model GV-700.
7″ or 9″ dia.	Models 11F, 22F, 21FA, 42F.
ORBITAL	Models 1GO-900, 1GRO-600.

POLISHER

7″ dia.	Model GV-500.

21S60

GO-900

22F60

2A

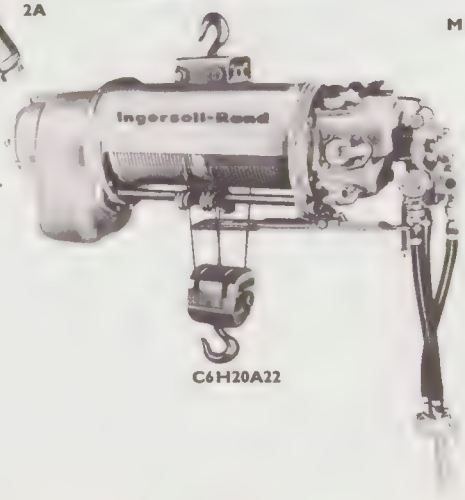
ML10

AIR CHIPPERS—SCALERS

Light	Models 171L, 181L, K2L, K2LC.
Med. to Heavy	Models 1, 2, 2A, 3, 4.
Retainer Type	Models W1, W2, W2A, W3, W4.
Needle Type	Models 171LN, 181LN.

AIR HOISTS

$\frac{1}{2}$ Ton Chain	Models ML10, MR10.
1 Ton Chain	Models ML20, MR20.
1 Ton Wire Rope	Model C6H20.
2 Ton Wire Rope	Model C6H40.
3 Ton Wire Rope	Model C6H60.



C6H20A22

INGERSOLL-RAND ELECTRIC POWER TOOLS

Impactools

$\frac{1}{4}$″ to $\frac{3}{8}$″ bolt dia.	Models 2U, WS-550, WS-650.
$\frac{5}{8}$″ to $\frac{1}{4}$″ bolt dia.	Models 8U, 8U-12, 34U.

Impactools—Torque Control

20 to 90 ft. lbs.	Model 5UT.

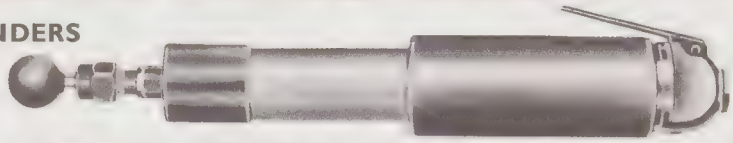
Power Hammer

Model HS625U.
Capacity $\frac{7}{16}$ to $1\frac{1}{2}$ dia. Holes
2″ Core Bits.

WS-550

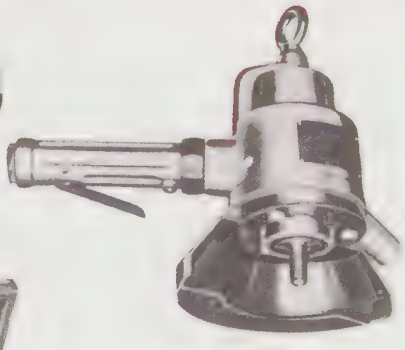
DESOUTTER PORTABLE PNEUMATIC TOOLS

GRINDERS



SR.11 HEAVY DUTY

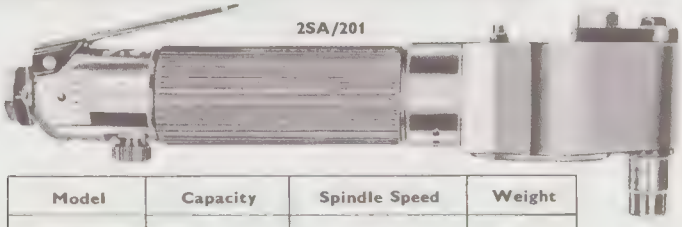
R.12 LIGHT DUTY



Model	Spindle Speed	Spindle Type or Collet Capacity	Weight
O3	64000	$\frac{1}{8}$" Collet	*
R11	16-18000	$\frac{1}{4}$" Collet	2 lb.
SR11	16-18000	$\frac{1}{4}$" Collet	3$\frac{1}{4}$ lb.
SR12	16-18000	$\frac{3}{8}$" x 26 T.P.I.	3$\frac{1}{4}$ lb.
P7G45	4500	$\frac{3}{8}$" x 11 T.P.I.	9$\frac{1}{2}$ lb.
P7G60	6000	$\frac{3}{8}$" x 11 T.P.I.	9$\frac{1}{2}$ lb.
P7G80	8000	$\frac{3}{8}$" x 11 T.P.I.	9$\frac{1}{2}$ lb.

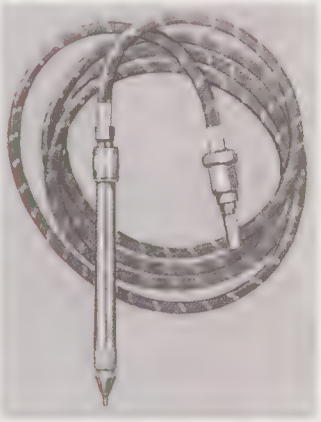
Model O.3 Supplied Complete with Hose, Collet, Spanners, 6 Wheels in Wooden Box.

CORNER SCREWDRIVERS AND NUTRUNNERS



2SA/201

Model	Capacity	Spindle Speed	Weight
2SA/201	$\frac{5}{16}$"	480	2$\frac{1}{2}$ lb.

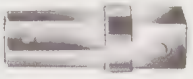


PNEUMATIC VIBRO PEN VP2

for engraving work on hardened tool steel, mild steel, non-ferrous metals, glass and plastics. Compressed air working pressure ranging from 25 to 100 psi, air consumption approximately 2 cu. ft./min. The pen is complete with built-in filter, male Schrader connector and 6 ft. of flexible hose.

SPANNERS

Box spanners are available in sizes from $\frac{5}{16}$" (5 mm.) to $\frac{5}{8}$" (16 mm.)

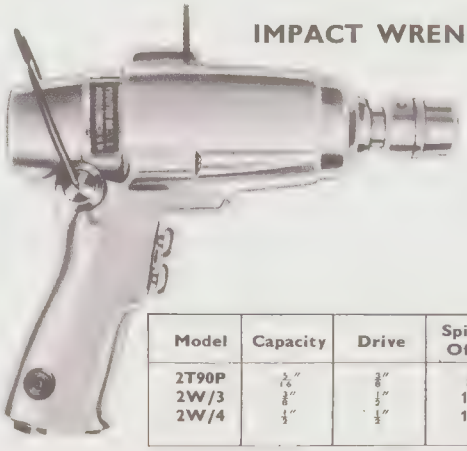


$\frac{1}{2}$" (12.7 mm.) square International adaptor for use with pneumatic spanners, enabling the use of all types of standard sockets.

Hexagon bits for use on socket-headed cap screws available in sizes from $\frac{5}{16}$" (5 mm.) to $\frac{5}{8}$" (16 mm.) across flats.

Model	Capacity	Spindle Speed	Weight
SR10/350	$\frac{3}{8}$"	350	3$\frac{1}{2}$ lb.

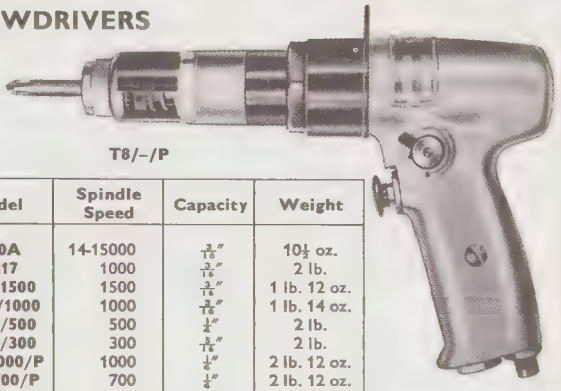
IMPACT WRENCHES



Model	Capacity	Drive	Spindle Offset	Length	Weight
2T90P	$\frac{5}{16}$"	$\frac{3}{8}$"	$\frac{7}{8}$"	7$\frac{3}{16}$"	2 lb. 6 oz.
2W/3	$\frac{3}{8}$"	$\frac{1}{2}$"	1$\frac{3}{8}$"	7$\frac{3}{8}$"	4 lb. 12 oz.
2W/4	$\frac{1}{2}$"	$\frac{1}{2}$"	1$\frac{3}{8}$"	8$\frac{1}{8}$"	5 lb. 6 oz.

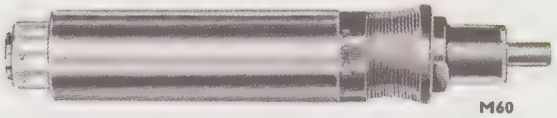
DESOUTTER PORTABLE PNEUMATIC TOOLS

SCREWDRIVERS

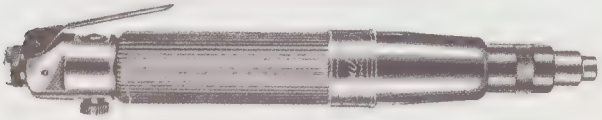


T8/–/P

Model	Spindle Speed	Capacity	Weight
M80A	14-15000	5/16"	10½ oz.
M217	1000	3/16"	2 lb.
2SA/1500	1500	3/16"	1 lb. 12 oz.
2SA8/1000	1000	3/16"	1 lb. 14 oz.
2SA8/500	500	¼"	2 lb.
2SA8/300	300	1/4"	2 lb.
2T8/1000/P	1000	¼"	2 lb. 12 oz.
2T8/700/P	700	¼"	2 lb. 12 oz.
2T8/400/P	400	1/4"	2 lb. 12 oz.
M223	310	5/16"	2 lb.
SR8/3300	330	⅜"	4 lb. 4 oz.

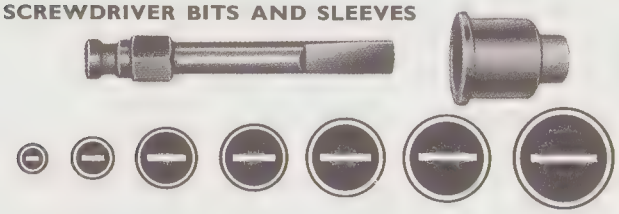


M60



2SA8

SCREWDRIVER BITS AND SLEEVES

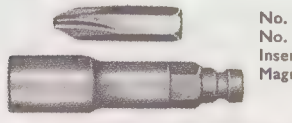


No. 00 No. 0 No. 1 No. 2 No. 3 No. 4 No. 5

COMBINED BITS AND SLEEVES

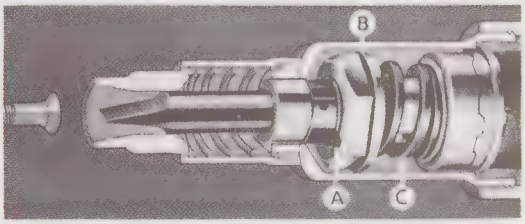
No. 00 for wood screws Nos. 1 and 2 (or 8 B.A. metal thread).
No. 0 for wood screws Nos. 3 and 4 (or 6 and 7 B.A. metal thread).
No. 1 for wood screws Nos. 5 and 6 (or 4 and 5 B.A. metal thread).
No. 2 for wood screws Nos. 7 and 8 (or 2 and 3 B.A. metal thread).
No. 3 for wood screws Nos. 9 and 10 (or 1 B.A. metal thread).
No. 4 for wood screws Nos. 11 and 12 (or 0 B.A. metal thread).
No. 5 for wood screws Nos. 13 and 14.

INSERT ADAPTORS AND INSERT BITS



No. 1-2-3 point, short insert bits.
No. 1-2-3 point, long insert bits.
Insert adaptor type EP 8622
Magnetic insert adaptor type EP 8970

CLUTCH SPRINGS



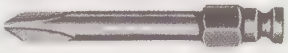
A Clutch Adjusting Nut. B Lock Washer. C Clutch Spring.

Weak E.P.7137A Yellow | Medium E.P.6742A Red | Strong E.P.6844A Green | Extra Strong E.P.7331A Blue

INTERNATIONAL ADAPTOR

Allows the use of all types of standard sockets with all screwdrivers (except M.60, M.65 and M.66). Available in two forms, with 5/32" square drive, Part No. 1659/3, or with ⅜" square drive, Part No. 2153/3.

PHILLIPS SCREWDRIVER BITS

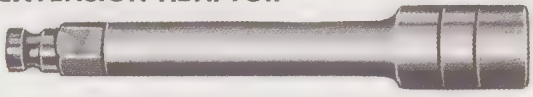


No. 1 for 6 and 5 B.A., 3 and 4 wood and 4G self tapping screws. No. 2 for 4-1 B.A., 5-10 wood and 6-10G self tapping screws. No. 3 for 0 B.A., 11-14 wood and 12-14G self tapping screws. For larger sizes use No. 4 bit.

NUTRUNNERS

for Nut Size from 8 B.A. to ⅜" Whit.

BIT EXTENSION ADAPTOR



For use with all Mighty Atom and Rotor Screwdrivers. Please quote overall length required when ordering. 2", 3", 4", 5" and 6" available.

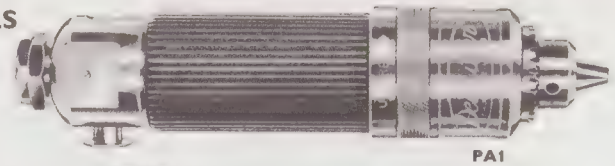
R.37

SHEARS

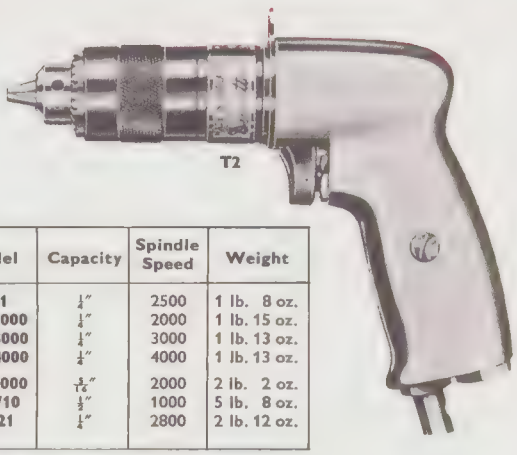
Model	Capacity	Cutting Speed	Minimum Radius	Weight
R37	14 S.W.G.	6 ft./min.	1½"	3¾ lb.

DESOUTTER PORTABLE PNEUMATIC TOOLS

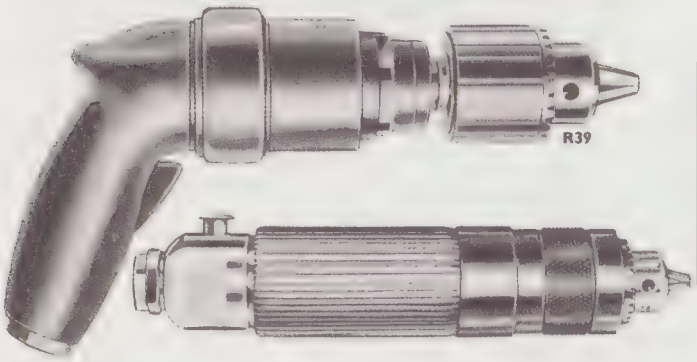
DRILLS



PA1



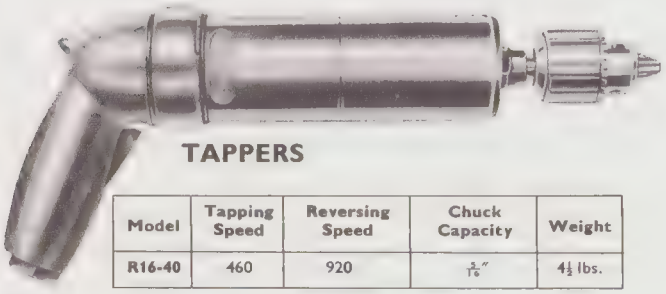
T2



R39

Model	Capacity	Spindle Speed	Weight
PA1	¼″	2500	1 lb. 8 oz.
T2/2000	¼″	2000	1 lb. 15 oz.
*T2/3000	¼″	3000	1 lb. 13 oz.
*T2/4000	¼″	4000	1 lb. 13 oz.
T3/2000	1/16″	2000	2 lb. 2 oz.
SR6/10	⅜″	1000	5 lb. 8 oz.
R2/21	½″	2800	2 lb. 12 oz.

* Straight or Pistol Grip.



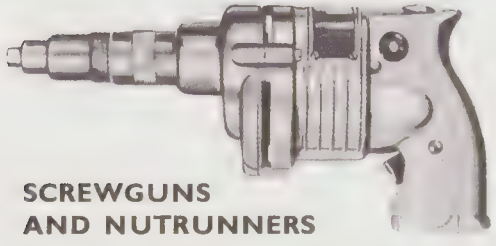
TAPPERS

Model	Tapping Speed	Reversing Speed	Chuck Capacity	Weight
R16-40	460	920	5/16″	4½ lbs.

BALANCERS

Model	Capacity
2A	0- 2 lb.
4A	2- 4 lb.
10F	5-10 lb.
15F	10-15 lb.

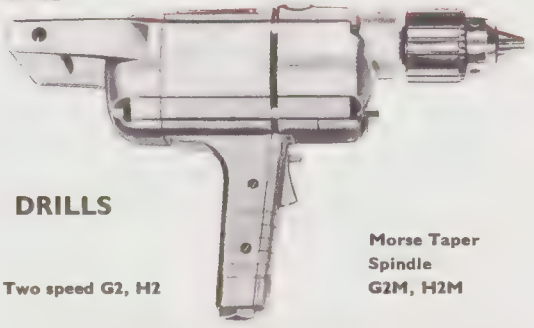
DESOUTTER PORTABLE ELECTRIC TOOLS



SGR 45

SCREWGUNS AND NUTRUNNERS

Specification	SGR 45
Capacity	
Wood Screws	No. 14
Metal Screw and Nuts	5/16″
Speed r.p.m.	450
Watts input full load	180
Weight	3 lbs. 2 ozs.



DRILLS

Two speed G2, H2

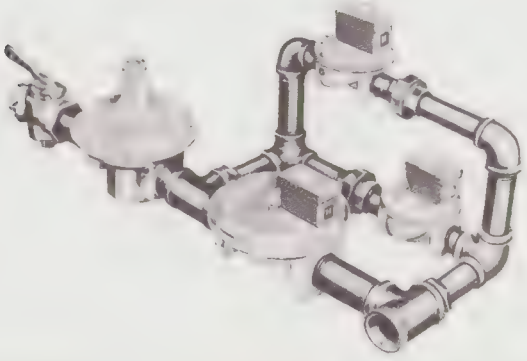
Morse Taper Spindle G2M, H2M

Specifications	G2	H2
Speed Running Light	1200	1050
	525	400
Drilling Capacity Steel	½″	⅜″
Drilling Capacity Wood	1″	1¼″
Watts Input on Full Load	500	500
Weight	9¼ lbs.	10¼ lbs.

Honeywell

GAS VALVES AND CONTROLS

GOVERNORS, OPERATORS, SAFETY SHUT OFF VALVES, BUTTERFLY VALVES



Maxitrol Governors: 20 C.F.H.–15,000 C.F.H. potential straight through flow regulation. Sizes $\frac{1}{8}$″–4″.

Diaphragm Valves: Diaphragm type, close off up to 5 p.s.i., available line or low voltage models, may be used with all types of gases.

Safety Shut off Valves: Used for commercial and industrial gas burners, separate actuator features damper drive arm, available hi-lo or modulating. Sizes 1″–3″. Fluid power operator provides positive close off.

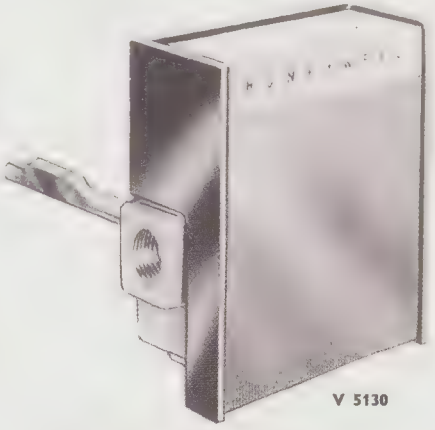
Motorised Gas Valve: Suitable all types of gases, heavy duty gear train, separable operator features damper drive arm.

Thermocouples: Iron constantin type used for manufactured, L.P. or natural gas available 24″, 36″, 48″ lengths for use with pilot burner.

Pilot Burners: Provide main burner ignition for gas fired heating equipment, used with a specific thermocouple for operation of pilot safety controls. Suitable all types of gases.

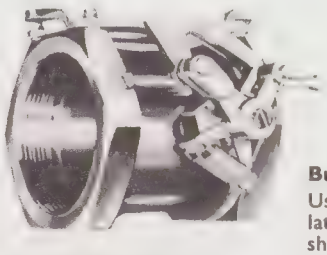
Pilotstats: Manual reset pilot and or main flame control devices, available as electrical interlocks or self actuating mechanisms.

Combination Gas Controls:
Available with add on operators for electrical or filled system operation or combinations of both, suitable for use with thermocouples and pilot burners, available with or without pressure regulators. 24 volt bi-metal or oil filled, millivoltage.



Water Heater Controllers:
Powerpile combination gas control used with powerpile generator self closing for complete safety shut off. Rod type or strap-on. Suitable for all gases.

Solenoid Valves
Suitable for pilot or main flame service available 240 volt or 24 volt. Normally closed type. Suitable oil, all types of gases.



Butterfly Valves:
Used with 2 pos, or modulating motor where tight shut off is not required.

Ask for your Honeywell Tradeline Controls Catalogue

Honeywell

HUMIDISTATS For Control of Humidification or Dehumidification

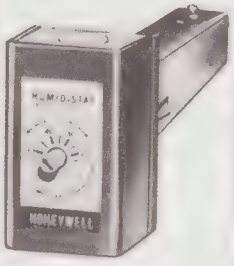
Ranges:	From 20% R.H. to 96% R.H.
Switching Actions:	SPST make on rise or make on fall. SPDT make on rise or make on fall. Modulating control action use with modulating motor.
Variety of Sensing:	Human hair, nylon or lithium chloride (use with relay).
Models available:	With or without lockable set point mechanism.
All Models:	Space mounting type duct mounting types available upon request.

Ask for your Honeywell Tradeline Controls Catalogue

H 63, H 93

H 46

H 61

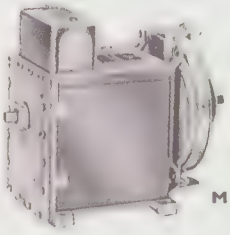

H 49

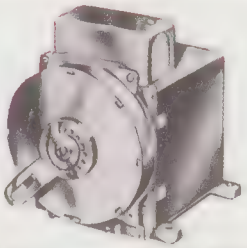
H 64

MOTORS VALVE, DAMPER OR STEP CONTROL OPERATORS

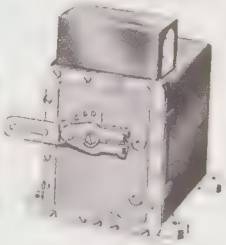
Torque Ranges:	From 15 in lbs. to 200 in lbs.
Models available:	For 2 position—reversing unidirectional and spring return operation, floating and modulating reversing and spring return operation.
Application:	Used with valve linkages to operate valves, damper linkages to operate dampers or auxiliary switches for step control operation.
Line or Low Voltage Models:	Available for 240 volt or 24 volt A.C. operation.
Inbuilt Switches:	Available on some models, provision made on models for external auxiliary switches or potentiometers.
Burner Motor Model:	Available with 90° or 160° stroke, special spark suppression network minimises effect of vibration.

Ask for your Honeywell Tradeline Controls Catalogue


M 905 FGK


M 405B, C

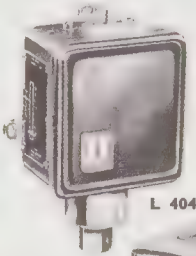
M 436


M 234, M 604

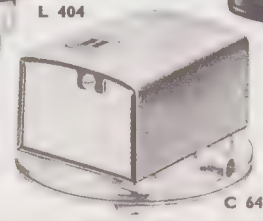
PRESSURE SWITCHES For Air, LP Gas, Manufactured Gas, Oil, Water, Steam and Vapors

Ranges:	From 25" HG Vacuum to 3000 p.s.i.
Switching Actions:	SPST make on rise, or make on fall. SPDT make on rise, or make on fall. Floating control for use with control motor. Modulating control for use with control motor.
Variety of Sensing:	Controllers may be used for measurement of positive pressure, differential pressure or Vacuum range applications.
Suitable for use with:	Air, LP gas, manufactured gas, oil, water, steam and vapors. Sensing elements bellows of copper and stainless steel (bronze spud), diaphragm of neoprene or bourdon tube of Phosphor bronze or stainless steel (bronze spud).

Ask for your Honeywell Tradeline Controls Catalogue


L 404

L 91


C 645

Honeywell

TEMPERATURE CONTROLLERS For Refrigeration, Air Conditioning, Industrial Usage

Ranges:	From −50° F to 1200° F.
Switching Actions:	SPST make on rise, or make on fall. SPDT make on rise, or make on fall. DPST make 2 circuits on rise. DPDT make 2 circuits in sequence or unison on rise or fall or modulating—1 or 2 potentiometers in sequence or in unison for operation with a motor.
Capillary Lengths:	5 ft., 10 ft. (high range) or 20 ft. Lengths.
Variety of Sensing:	Controllers may be used for measurement of air, or liquids when used with a separable well.
Wells:	Constructed of copper or stainless steel, used with pressure fitting or spring clip to secure bulb in well.
Suitable for use with:	Remote or in line control of refrigeration, heating, air conditioning or ventilation.
Outside Air Reset:	Available with dual bulb controllers for use with modulating motors.

Ask for your Honeywell Tradeline Controls Catalogue

L 4007

L 4006

L 6008

LA 419

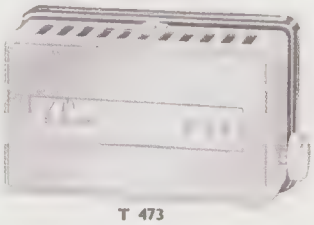
SPACE ROOM THERMOSTATS Heating, Cooling, Combination Heating and Cooling

Ranges:	From 20° F to 140° F.
Switching Actions:	1-SPST make on rise, or make on fall. 2 or 3 SPST switches make in sequence for heating, cooling or combination operation, SPDT make on rise or fall, modulating control 1 or 2 potentiometers making in sequence or in unison.
Variety of Sensing:	Bellows or bi-metal operation of mercury or micro switch.
System Switches:	on sub-bases provide auxiliary switching functions.
Inbuilt Clock Model:	Provides automatic night shutdown and programmed start up.
Line or Low Voltage Models:	Available for 240 volt or 24 volt A.C. operation.
Models available:	With or without thermometers, with or without tamperproof covers.

Ask for your Honeywell Tradeline Controls Catalogue

T 87

T 870


T 473

T 834

WATER—STEAM VALVES For Control of Water or Steam

Types:	2-Way (straight through flow). 3-Way (mixing operation).
Body Construction:	Bronze, cast iron or cast steel.
Connections:	BSPT screwed or BS table F flanged.
Trim:	Bronze or stainless steel (use for steam).
All Models:	Have stainless steel stems and bronze stem buttons.
Motorised Valves:	Complete with operator, 1 model spring return to close designed for water control systems 40°–190°F, other models with clip on operators for use with water or steam.

Ask for your Honeywell Tradeline Controls Catalogue

K 936

K 924

Honeywell

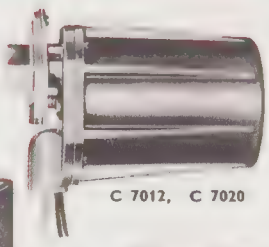
FLAME SAFEGUARD CONTROLS Oil, Gas or Dual Fuel

Units available: For sensing of oil, gas or dual fuel, suitable for monitoring pilot, main flame or combination of the two.

Detectors: Cadmium sulphide (oil) flame rod (gas) photocell (oil) "purple peeper" and "mini peeper"—ultraviolet detectors (gas, oil, dual fuel).

Relays: On/off control of pilot and or main flame, self checking start feature, ignition period through an ignition transformer, available with or without manual reset feature equipped with or without alarm terminals.

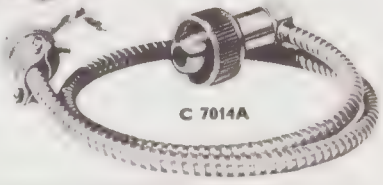
Programming: Control of pilot and or main flame, self checking start feature, timed ignition time prepurge and postpurge operation of fan blower motor, manual reset feature firing rate option provides on-off, hi-lo, modulating operation—field selectable, return to high fire after fuel valve opens or after ignition period—equipped with alarm terminals.


C 7012, C 7020

C 7010A

C 701GA

C 7013A

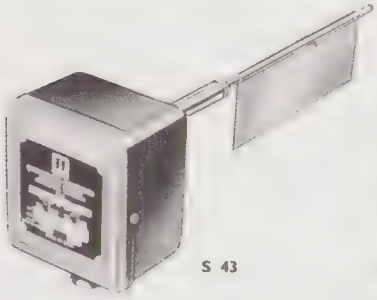

C 7014A

C 7027

C 7035

CONTROL ACCESSORIES AND INTERLOCKS

AUXILIARY SWITCHES, FLOW SWITCHES, AIR OR LIQUID


S 43

Air Flow Switches
Minimum air flow for operation 500 FPM make left to right or right to left designed for duct mounting.

Q 607

Auxiliary Potentiometers
Designed for motor end mounting available in single or dual potentiometers.

S 400A

Timers
Available 1–7 second each $\frac{1}{2}$–1 minute 220 volt 50 cps.

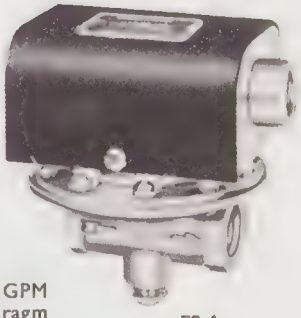
Q 181

Auxiliary Switches
Designed for motor end mounting available in single or dual SPDT micro switch models.

Ask for your Honeywell Tradeline Controls Catalogue

FS 4

FS 7


FS 1

McDonnell Miller Liquid Flow Switches
Suitable for flows from $\frac{1}{2}$ GPM upwards, paddle or diaphragm types available for in line flow operation.

INDEX

GENERAL CATALOGUE 1970

Page

ABRASIVE Belts 280
- Cut Off Wheels 264
- Discs 282
- Paper 280
- Rolls 280
- Sharpening Stones 278
- Sheets 280
- Sticks 275
- Wheels 261
- Wheel Dressers 271
- Wheel Segments 265

ACETYLENE-AIR EQUIPMENT 140
ACETYLENE TUBING 105
ACID CORED SOLDER 352
ADHESIVES 347
ADHESIVES 3M BRAND 348
A. & F. BEARING METALS 122
AIR-FUEL GAS EQUIPMENT 140
AIR Compressors 161
- Guns 94
- Hose 105
- Hose Fittings 92
- Safety Valves 30
- Tools 508
- Transformer 160

ALLEN KEYS 247
ALUMINIUM Brazing Flux 142
- Rivets 255
- Sheet 118
- Solder 120
- Tube 111

"ANCHOR" EQUIPMENT 164
ANCHORS Masonry 257
ANGLE Cutters 416
- Grinders 291
- Iron 128

ANGLE PLATES 448
ANTI FRICTION METALS 122
ANVILS 386
ANVIL TOOLS 386
APEXIOR 346
APRONS Welders 345
ARC WELDING EQUIPMENT 145

Page

ARNOLD DE VILBISS SPRAY PAINTING EQUIPMENT 159
ASBESTOS PRODUCTS & PACKINGS 220
AUGERS 391
AUSTRA MACHINE TOOL ACCESSORIES 423
AUTOPOSITIVE INJECTORS 32
AXES 387

BABBIT METAL 122
BACK STAND IDLER 281
BACK UP PAD ASSEMBLY 282
"BAKER'S" Soldering Fluid & Fluxes 352
BALL COCKS 54
BALL JOINTS 462
BALL OILERS 496
BALL PEIN HAMMERS 383
BALL TRANSFERS 213
BANDSAW Blade 379
BANGOR SLIDING DOOR TRACK 345
BARREL DRIFTS 384
BARRIER CREAM 334
BARROWS 218
"BASSICK" Casters 201
BASIN CONNECTORS 55
BATHROOM FITTINGS, Chrome Plated 55
BEAM TROLLEYS 166
BEAMS, Steel 129
BEARING Blue 335
- Bronze 121
- Metal 122
- Metal Thermometers 228
- Scrapers 389

BEARINGS 458
BELT Fasteners 463
- Hooks 463
- Lacing Machine 463
- Laces 463

BELTING, Leather & Canvas 463
- Vee 464

BURNAX FLUID 352

INDEX

Page

BENCH DRILLS 318
BENCH DRILL STANDS 290
BENCH GRINDERS, Electric 314
BENCH VICES 371
BENDERS Bar 322
Tubes 324
Pipe 324
BEVEL PROTRACTORS 439
BIB COCKS 52
BINDERS, Load 187
BITS, Auger 391
Lathe Tool 422
BITUMINOUS PAINT 350
"BLACKHAWK" EQUIPMENT 325
BLACK & DECKER PORTABLE ELECTRIC TOOLS 296
BLACK WIRE 130
BLACKSMITHS TOOLS 386
BLACK STEEL, SHEET 124
BLADES Hacksaw 379
BLOWERS, Portable Electric 293
BLOW GUNS 94
BLOW LAMPS & PRICKERS 394
BLOW-OFF COCKS 27
BLOW-OFF VALVES 27
BOILED OIL 346
BOILER Door Joints 221
Gauge Glasses 225
Lagging 222
Mountings 29
Tube Brushes 331
Tube Expanders 501
BOLSTERS 384
BOLTS Brass 230
Black 234
Bright 229
Eye 180
High Tensile 231
Precision Cold Formed 231
Stainless Steel 230
BOLT CUTTERS 368
BONNEY FORGE WELDING FITTINGS 502
BOOSTER CONVEYOR 215
BORING BARS 422
BOSCH PORTABLE ELECTRIC TOOLS 302
"BOSTIK" CEMENT 347
"BOTANITE" 346
BOW SHACKLES 183
BOX SPANNERS 362

Page

BOXWOOD RULES 445
BRACES Carpenters 391
"BRAEMAR" CONVEYORS 212
BRASS Bars 119
Bolts 230
Condenser Tube 110
Flat Section 119
Flat Washers 236
Hinges 337
Gauze, Woven Wire 119
Nuts 238
Sheet 118
Shim 118
Tube 110
BRASSO 334
BRASSWARE, Plumbers 55
BRAZING Alloy 142
Flanges 56
Fluxes 142
Lamps 394
BREAST DRILLS 392
BRICK Drills 384
Bolsters 384
BRICKS Fire 351
BRIDGE REAMERS 413
BRONZE Bearing 121
Sheet 118
Sintalite Bushes 461
Unions 29
Wire 119
BROOM HANDLES 388
BROOMS and Brushes 334
BRUSHES Boiler Tube 331
Circular Wire 330
Condenser Tube 331
Decarbonising 333
Dusting 334
Foundry 334
Paint 334
Sash 334
Scratch Wire 334
Scrubbing 334
Steel Wire 334
Welders 334
Whitewash 334
Wire Wheel 330
B.T.M. TUBES 111
BUBBLER COCKS 53
BUCKETS, Galvanised 334

INDEX

Page

BUSHING, "KEMBRONZE" 121
BUTT HINGES 336
BUTTON DIES 408
BUTTON STOCKS 407
BUTWELDING FITTINGS 44
B7 STUDS 240

C

C.R.C. COMPOUNDS 346
C. & H. GEARED MOTORS & VARIABLE DRIVES 483
CALCIUM CHLORIDE 334
CALIPERS 441
CANS Oil 500
CAPS Malleable Iron 38
Welding 45
Wrought Iron 42
CAPILLARY FITTINGS 62
CARB-O-LOCK INSERTS 430
CARBOLOY CEMENTED CARBIDE 425
CARBON TETRACHLORIDE 334
CARGO HOOKS 189
CARPENTERS Pencils 392
Tools 391
Vice 371
CASE Openers 386
Slings 172
CAST IRON STICK 118
CAST IRON WHEELS 199
CASTERS 198
CASTOR OIL 346
CAULKING COMPOUND 347
CAULKING COTTON 347
CAUSTIC SODA 334
CEMENT 351
CEMENT Gasket 225
CENTRE Drills 401
Gauges 439
Punches 385
CENTRES Lathe 422
CHAIN HOISTS 162
CHAIN SLINGS 185
CHAIN Coil 184
Chandelier 343
Hand 168
Hooks 185
Load Binder 187

Page

Jack 343
Pipe Wrenches 367
Pipe Vices 370
Transmission 486
Twisted Link 343
CHALK 335
CHALK LINES 392
CHANDELIER CHAIN 343
CHANNEL STEEL 130
CHASER DIES 410
CHECK VALVES Ball 14
Bronze 9
Cast Iron & Cast Steel 11
Controllable Lift 12
"Duoseal" 10
Forged Steel 13
Piston 14
Renewable Disc 9
"Super" Bronze 10
"Validus" 10
CHEQUER PLATE 121
CHIPPING HAMMERS 383
CHISELS, Cold 384
Wood 390
CHROME PLATED BRASSWARE 55
CHROME VANADIUM SPANNERS 354
CHUCK KEYS 319
CHUCKS, Drill 319
Lathe 320
CIRCULAR WIRE BRUSHES 330
CISTERN COCKS 52
"CLAM" TRAPS 33
CLAMPS, Case 172
Drop Forged 372
Drum 173
Girder 172
"RENFROE" Plate 175
Sash 372
CLAW HAMMERS 382
CLEANING CLOTH 334
"CLIP" PATTERN GATE VALVES 20
CLIPS, HOSE OR PIPE 95
CLOTHING, PROTECTIVE 345
CLOUTS 255
COACH SCREWS 242
COAL TAR 346
COATED ABRASIVES 279
COCK FIBRE 221
COCKS, All Iron 25

INDEX

Page

COCKS, Ball 54
Bib 52
Blow-off 27
Bronze 26
Bubbler 53
Cast Iron 25
Chrome Plated 52
Cistern 52
Gauge 28
Gas 54
Hose 52
Main 53
Meter 52
Path 53
Pet 28
Petrol 79
Pillar 52
Pressure Gauge 28
Recess 52
Shower 52
Spring Action 53
Tank 54
Tube 54
Urn 54
COCONUT FIBRE 345
COKE 345
COIR MATS 334
COLD CHISELS 384
COLD SETS 386
COLLARS, SHAFT 457
COMBINATION SETS 439
COMBINED COCK & CHECK VALVES 27
COMPRESSED ASBESTOS JOINTING 223
COMWELD WELDING & CUTTING EQUIPMENT 132
"CONELOK" NUTS 239
CONTACT WHEELS Rubber 281
Felt 271
CONDENSER Cord 221
Tube 110
Tube Brushes 331
CONTROLLABLE LIFT CHECK VALVES
Bronze 10
Cast Iron & Cast Steel 12
Forged Steel 13
CONVEYOR EQUIPMENT 212
COPPER, Rivets 255
Sections 119
Sheets 118

Page

Tube 107
Wire 119
COPPER HAMMERS 383
CORE DRILLS 398
CORK Jointing 224
Sheet 227
CORRUGATED JOINT RINGS 227
COTTER PINS 254
COTTON Condenser Cord 221
Mops 334
Packing 221
Waste 334
COUNTERS 452
COUPLINGS, Air Hose 94
Shaft 472
Welding Hose 105
COWLEY LEVELS 393
CRAMPS 372
CRAYONS 335
CREOSOTE 346
"CROCKATT" Valve Reseaters 394
CROSS EXPANSION PISTON ROD PACKING 220
CROWBARS 386
CUP HEAD BOLTS & NUTS 235
CUP WASHERS 236
CUPS Grease and Oil 499
CUTTERS Angle 416
Bolt 368
Concave & Convex 417
Involute 418
Pipe 369
Side & Face 416
Slotting 414
Washer 385
Wire 364
Woodruff Key 417
CUTTING COMPOUND 346
CUTTING NOZZLES 137
CUT OFF MACHINES 317
CUT OFF WHEELS 263

D

DAMPCOURSE 350
DEADEYES 459
DEEP HOLE DRILLS 398
DEGREASANTS 334

INDEX

Page

DEMAGNETISERS 451
DEPTH GAUGES 438
DESOUTTER AIR TOOLS 510
DEUBLIN UNIONS 503
DEVCON PRODUCTS 347
DIAL INDICATORS 434
DIAMOND ABRASIVE WHEELS 272
DIAPHRAGM RUBBER 227
DIAPHRAGM VALVES 15
DIE Heads 407
Nuts 409
Sets 329
DIES 408
DIES AND STOCKS 409
DISC VALVES 5
DISCS, Abrasive 282
DISINFECTANT 334
DISTILLED WATER 345
DIVIDERS 441
"DIXON'S" Belt Dressing 463
Gasket Cement 226
Graphite 227
Pipe Jointing Compound 226
DOOR CLOSERS 340
DOWEL PINS 457
"DOWN-EE" FITTINGS 98
DREADNOUGHT VALVES 504
DRESSER-MALCO FITTINGS 40
DRESSERS, GRINDING WHEEL 271
DRESSING, BELT 463
DRILL Bits 397
Chucks 319
Drifts 401
Grinding Attachment 314
Jig Brushes 449
Sets 402
Sleeves 401
Sockets 401
Stands 402
DRILLS Bench 318
Brick 384
Breast 392
Centre 401
Deephole 398
Electric Portable 288
Hand 392
Jobbers 398
Letter 398
Long Series 398

Page

Masonry 403
Metric 399
Number 400
Pedestal 318
Short Series 400
Slot 419
Star 384
Straight Shank 399
Stub 400
Tapered Shank 397
Tungsten Tipped 403
Twist 397
Wire Gauge 398
DRILLS & COUNTER SINKS 401
DRUM CLAMPS 173
DRUM PUMPS 100
DRYSAL 334
DRYVINS 259
DUFOR BUSHES 460
"DUOSEAL" GLOBE STOP VALVES 6
DUPLEX SHEARS 305
DYMO EMBOSSING TAPES 335
DYNABOLTS 257

E

"EARGUARD" EQUIPMENT 158
EBONITE 227
ECLIPSE AUTO CENTRE PUNCH 441
ELASTIC STOCKS 407
EJECTORS 32
ELBOWS, Brass 60
Malleable Iron 38
Wrought Iron 42
ELECTRIC, Soldering Irons 394
Tools 288
ELECTRICAL TAPE 286
ELECTRODE HOLDERS 145
ELECTRODES WELDING 147
ELECTRO MAGNETIC DRILL STAND 290
ELEVATING TRUCKS 214
EMERY Cloth 280
Tape 280
Wheels 261
Wheel Dressers 271
END CUTTING NIPPERS 364
END MILLS 420
EVEREADY BATTERIES 345

INDEX

Page

EXPANDING Bits 391
Reamers 412
EXHAUST FANS 493
EXPANDET ANCHORS 257
EXTRACTOR Sets 403
EYE Bolts 180
Hooks 188
Shields 154
EZY-OUT TYPE EXTRACTORS 403

F

FACE MILLS 415
FACE SHIELDS 154
FANS 493
FASTENERS, BELT 463
FEEDERS, OIL 500
FEELER GAUGES 446
Gauge Stock 446
FEIN PORTABLE ELECTRIC TOOLS 310
FELT CONES 271
FENNER-DODGE EQUIPMENT 464
FERROPRO PAINTS 346
"FIBERLOC" ABRASIVES 263
FIBRE, Coconut 345
Red 227
FIBRO Cutters 393
Nails 255
FIGURE & LETTER PUNCHES 454
FILE Card 376
Handles 388
FILES 374
FILMFLEX 346
FILTER TOWELLING 345
FILTERS, AIR LINE 160
FIRE Bricks 351
Clay 351
FIRE FIGHTING FITTINGS 59
FIRM JOINT CALIPERS 441
FISH OIL 346
FITTINGS, Airline 92
Bathroom 52
Brass 60
Butt Welding 44
Capillary 62
Copper Sewerage 53
Flare 71
Grease 494

Page

Hose 95
Hot Water 60
Malleable Iron 38
Petrol 74
Pipe 38
P.V.C. 102
Sewerage 57
FLANGE TABLES 46
FLANGES 45
FLARE FITTINGS 71
FLARING TOOL 369
FLEXIBLE Couplings 473
Shaft Grinders 293
FLINT LIGHTER 144
FLINTS 144
FLUX "BAKER'S" Soldering 352
Brazing & Welding 142
FOOT VALVES & STRAINERS 101
FORGES 386
FORMINEX 346
FOUNDRY Brushes 334
Riddles 345
FRENCH CHALK 335
FUNNELS 500

G

GALVANISED Bolts & Nuts 234
Pipe 115
Sheet 124
GARBAGE BINS 334
GARDEN WHEELBARROWS 218
GAS SAVER 145
GAS VALVES 24
GASKET Cement 225
Rings 224
GATE VALVES, Bronze 18
Cast Iron & Cast Steel 20
Quick Action 19
GAUGE Glasses 225
Cocks 28
GAUGE GLASS Cutters 366
Mountings 28
Protectors 29
Rings 225
GAUGES, Acetylene 141
Air 37
Depth 438

INDEX

Page

Dial 435
Drill & Wire 447
Feeler 446
Oxygen 141
Pressure 37
Screw Pitch 447
Screw Cutting 446
Steam Pressure 37
Taper Wire & Thickness 446
Thickness & Feeler 446
Thread 447
Vacuum 37
Water 29
Wire 447
GAUNTLETS 345
GAUZE WIRE 119
G. CLAMPS 372
GEAR CUTTERS INVOLUTE 418
GEARED MOTORS 482
GEAR PUMPS 101
GEAR REDUCTION UNITS 479
GEARS 484
GIB HEAD KEYS 457
GIRDER Clamps 173
Trolleys 174
GLAND COCKS, Bronze 28
Cast Iron 25
GLASSES, Gauge & Lubricator 225
GLASS PAPER 280
GLOBE VALVES, Bronze 4
Cast Iron & Cast Steel 7
"Duoseal" 6
Forged Steel 7
Renewable Disc 6
"Super" Bronze 5
"Validus" 6
GLOVES 345
GLUE BRUSHES 334
GLUE 347
GLYCERINE 347
G.M.F. GRINDERS 314
GOGGLES 150
GRAPHITE 227
GRAPHITE Grease 346
Jointing Compound 226
GRATES, Trapscrew 57
GRAVITY CONVEYORS 212
GREASE AND OIL Cups 499
Guns 499

Page

GREASE Fittings 494
Nipples 494
GREASE GUN ACCESSORIES 498
GREASES 346
GRINDERS, Electric Bench 314
Pedestal 316
Portable 291
GRINDING Discs 263
Paste 271
Wheels 261
Wheel Dressers 271
GRIPS, WIRE ROPE 194
GROOVERS 386
GRUB SCREW KEYS 247
GRUB SCREWS 243
GROUND FLAT STOCK 422
GUNS, Air 94
"ARNOLD DEVILBISS" Spray Finishing 159
Flint 144
Grease & Oil 499
GULLIES & RISERS 57
GULLY TRAPS 57
GUTTER BOLTS & NUTS 251

H

HACKSAW Blades 379
Frames 379
Machines 316
HAIR FELT 227
HAMMERLOCK 184
HAMMERS 382-383
HAND Brushes 334
Chain 168
Chasers 410
Drills 392
Forges 386
Reamers 411
Saws 391
Taps 404
Trucks 216
Winches 169
HANDLES 388
HARDITE 346
HASPS & STAPLES 338
HATCHETS 387

INDEX

Page

HATS SAFETY 155
HEATERS STEAM WATER 33
HEAT RESISTANT PAINT 346
HEIGHT GAUGES 438
HELDON FITTINGS 68
HELMETS, WELDING 149
HEMP, DRY AND GREASY 221
HERC-ALLOY CHAIN 184
HESSIAN 345
HIGH FREQUENCY GRINDERS 312
HINGES 336
HOISTS CHAIN 164
HOLDERS Electrode 145
Lathe Tool 421
HOLE SAWS 328
"HOLZIT" HAND GRIPS 172
HONEYWELL CONTROL EQUIPMENT 513
HOOKS, CHAIN 188
HOSE Acetylene 105
Air 105
Canvas Fire 59
Clamps 95
Clips 95
Cocks, Fire 59
Fittings 96
Menders 96
Nuts & Tails 96
Nozzles 96
Oxygen 105
Plastic 104
Polythene 104
Sand & Shot Blast 104
Spray Painting 160
Steam 106
Suction 105
Tail Pieces 96
Water 106
Welding 105
HOT WATER FITTINGS 60
HYDRANT FITTINGS 59
HYDRAULIC Crane 197
Door Closers 340
Jacks 326
Pallet Truck 197
Pump Packing 220

Page

HYDROMETERS 228
HYDROSEAL 350

I

IDLERS, BACKSTAND 281
"IMEX" RIVETS 256
INDICATOR Cord Metallic 335
Paper 335
INDICATORS Dial 434
Speed 452
INGERSOL-RAND TOOLS 508
INJECTORS 32
INSERTION, RUBBER 227
INSIDE Calipers 441
Micrometers 437
INSULATING Board 227
Tape 226
INVOLUTE GEAR CUTTERS 418
IRON SHEET, Galvanised or Plain 124
IRONS, SOLDERING 394

J

JACK CHAIN 343
JACKS 326
JACOBS CHUCKS 319
JENNY CALIPERS 441
JOBBERS DRILLS 398
JOLT HEAD NAILS 255
JOINT RINGS, "TAYLORS" 227
JOINTING 223
JOINTING COMPOUNDS 225

K

KALSOMINE BRUSHES 334
KANGO ELECTRIC HAMMERS 313
KEMBLA COPPER TUBE 107
KEMBRONZE 121
KEROSENE 334
KEYS Gib Head 457
Grub Screw 247
Woodruff 457

INDEX

Page

KEY SEAT CLAMPS 440
KNURLING TOOLS 421

L

LADDERS 351
LADLES 394
LAGGING Asbestos 222
Hair Felt 227
LAMP Cotton 221
Scissors 389
LAPPING COMPOUND 271
LAPPING PLATES 449
LASHING & TWINE 191
LATHE Boring Bars 421
Centres 422
Chucks 320
Cut-Off Bits 421
Tool Bits 422
Tool Holders 421
LAUNDRY ARM 55
LEAD LADLES 394
LEAD Pipe 119
Sheet 118
Wire 119
LEATHER Aprons 345
Belting 463
Gauntlets & Gloves 345
LENSES Welding 149
LETTER Stamps 454
LEVELS 393
LEVELS PRECISION 449
LEVER HOISTS 170
LIFTING JACKS 326
LIGHT GLOBES 345
LIME 351
LINE LEVELS 393
LIQUID GLUE 347
LITCHFIELD EQUIPMENT 396
LITHARGE 347
LIVE CENTRES 342
LOAD BINDERS 187
LOAD SKATES 197
LOCKNUTS 238
LOCK WASHERS 236
LOCKS 340
LOW MELTING POINT ALLOYS 122
LOXINS 259

Page

LOXIN TOOLS 259
LUBRICATING Graphite 227
Grease 346
LUBRICATOR GLASSES 225
LUBRICATORS 500
LUMBER CRAYON 335

M

3M BRAND ADHESIVES 348
"MAASDAM" POW'R-PULL 171
MACHINE Taps 406
Reamers 411
Vices 373
MACHINE TOOL ACCESSORIES 423
MACKAY RUBBER MOUNTINGS 490
MAGNOLIA BEARING METAL 122
MAIN COCKS 53
MALCO PUMPS 100
MALLEABLE PIPE FITTINGS 38
MALLETS 382
MALTHOID 350
MANGANESITE 226
MAGNETIC TOOLS 450
MANILA ROPE 191
MARKAL PAINTSTIK 350
MARKOUT STAIN 335
MARLINE 191
MASH HAMMERS 383
MASKING TAPE 283
MASONRY, Anchors 257
Drills 403
MATS, Coir 334
MATTOCKS 387
MERCER DIAL GAUGES 434
METALLIC ASBESTOS Cloth 222
Tape 221
METALLIC H.P. JOINTING 223
METALLIC TAPES MEASURING 444
METAL THREAD SCREWS 251
METHYLATED SPIRITS 334
MICROFYNE GRAPHITE 227
MICROMETER DEPTH GAUGE 439
MICROMETERS 436
MICROSET REAMERS 412
MILD STEEL 124
MILL BOARD, ASBESTOS 222
MILLING CUTTERS 414

INDEX

Page

MINERAL TURPENTINE 334
MIXER, STEAM AND WATER 33
MOPS COTTON 334
MORSE TAPER Reamers 412
Sockets 401
MOUNTED POINTS 268
MULTIGRIPS 366

NAIL Pullers 386
Punches 385
NAILS 255
NEATSFOOT OIL 346
NEEDLE FILES 376
NEEDLE VALVES 4
NEOPRENE RUBBER 227
NETA HOSE FITTINGS 96
NIBBLERS 304
NIGHT LATCHES 341
NIPPERS & PLIERS 364
NOLOK 89
NON FERROUS METALS 108
NON RETURN VALVES 9
NORICENE 346
NOZZLES HOSE 96
NUMBERING HEADS 456
NUTS Acorn 239
Black 239
Brass 238
Bright 238
Castle 238
High Tensile 231
"Nyloc" 239
Steel Pressed 239
Stainless Steel 238
Wing 239
NUTS & TAILS 96
NYLON TUBE FITTINGS 82
NYLON TYRED WHEELS 198

O CLIPS 95
OIL & GREASE GUNS 499

Page

OIL Cans 500
Cups 500
Drum Pumps 100
Feeders 500
Fillers 500
Funnels 500
Jointing 223
Jointing Compound 225
Measures 500
Stones 274
Syringes 500
OILERS SIGHT FEED 500
OILS 346
OIL RESISTING PACKINGS & JOINTINGS 223
ORBITAL SANDERS 291
OUTSIDE Calipers 441
Micrometers 436
OXY ACETYLENE WELDING & CUTTING EQUIPMENT 142

PABCO PRODUCTS 350
PACKING Knives 390
Screws 220
PACKINGS, for all applications 220
PAD BOLTS 339
PADLOCKS 340
PAINT Brushes 334
Spray Finishing Equipment 159
Scrapers 389
PALLET TRUCK 197
PANEL PINS 255
PARALLEL SLIDE VALVES Cast Iron, Cast Steel
Forged Steel 22
PARTING OFF TOOLS 421
PENETRATING OIL 346
PERA MACHINE REAMERS 413
PERMACEL THREAD SEALER 226
PERMANENT MAGNETS 451
"PERMANITE" JOINTING 223
PET COCKS 28
PETROL Cocks 79
Fittings 74
PETROLEUM JELLY 346
PHENOL 334
PHOSPHOR BRONZE Sheet 118
"KEMBRONZE" 121

INDEX

Page

PHOSPHOR BRONZE Wire 119
PIANO TROLLEY 217
PICK HANDLES 388
PICKS 387
PINCERS 364
PINCH BARS 386
PIN Punches 385
Vices 440
PINS, Cotter 254
Taper 457
PIPE, A.P.I. 114
Copper 107
Galvanised 115
Lead 119
Steam 115
PIPE Benders 224
Cutters 367
Fittings 38
Flaring Tool 369
Hanging Clip 95
Hooks 95
Jointing Compound 225
Rail Fittings 98
Saddles 95
Screwing Machines 323
Stocks & Dies 407
Vices 370
Wrenches 367
PLAIN Mills 414
PLANES, Carpenters 370
PLASTIC Drill Stands 402
Hose Fittings 92
Metal 347
Wood 347
PLATE CLAMPS 175
PLIERS & NIPPERS 364
PLATFORM TRUCKS 215
PLIOBOND 347
PLUG COCKS, Bronze 26
Cast Iron 25
PLUGS AND WASHERS 57
PLUMB-BOBS 392
PLUMBERS Tools 367
Hemp 221
PLUMMER BLOCKS 459
PODGER SPANNERS 353
POLISH, Brasso 334
"POP" RIVETS 256
PORTABLE ELECTRIC TOOLS 288

Page

POWER PLUS GASKET GOO 226
PRIOR MARKING DEVICES 454
PRECISION MEASURING TOOLS 436
PRESSED NUTS 239
PRESSURE GAUGES 37
PRESSURE REDUCING VALVES 36
PROTRACTORS 439
PROTECTIVE CLOTHING 345
PULLEYS 462
PULLEY BLOCKS 192
PUMP PACKING 220
PUMPS 100
PUNCHES, Belt 285
Centre 385
Letter & Figure 454
Nail 385
Pin 385
Roofing 384
Wad 385
PUTTY 347
PUTTY KNIFE 389
P.V.C. PIPE & FITTINGS 103

Q

QUERSA CHASING MACHINE 301
QUICK ACTION GATE VALVES 21

R

RADICON SPEED REDUCERS 479
RADIUS GAUGE 446
RAINWEAR 345
RASPS & FILES 375
RATCHET, PIPE STOCK & DIE SETS 407
RAWHIDE HAMMERS & REFILLS 382
RAWL BRAND MASONRY ANCHORS 358
REAMERS 411
RED Fibre 227
Lead 346
REDUCING VALVES 36
REFRIGERATION FITTINGS 71
REFRIGERATION TUBE 109
REGULATORS "COMWELD" 141
RELIEF VALVES, Bronze 30
Cast Iron & Cast Steel 31
RENEWABLE DISC VALVES 5

INDEX

Page

RENFROE CLAMPS 173
RESEATERS FOR VALVES 394
RESIN 347
RESIN CORED SOLDER 352
RESPIRATORS 156
RIDDLES 345
RING SPANNERS 355
RIVET TONGS & SETS 386
RIVETS 255
ROCK TOOLS 384
ROCKWELL-PORTER CABLE PORTABLE ELECTRIC TOOLS 294
ROD SAW 376
ROLLED STEEL SECTIONS 128
ROLLER CHAIN 486
ROLLER GRAVITY CONVEYORS 212
ROOFING Nails 255
- Punches 384
- Screws 254
- Squares 392

ROPE Asbestos 222
- Manila & Sisal 191

ROPE Blocks 192
- Grips Wire 194
- Slings, Wire 193
- Sockets 194
- Thimbles 195

ROTARY FILES & BURRS 377
RUBBER & CANVAS PACKING 220
RUBBER, Cord 227
- Hose 104
- Insertion 227
- Neoprene 227
- Port Strip 227
- Sheet 227
- Solution 348
- Valves 15
- Vee Belts 464
- Mallets 382
- Wheels 199

RULES 442

S

S.F. HOOKS 189
S.R.D.B. COUPLINGS 474
SAFETY Hats 155
- Goggles 150

Page

- Spectacles 153
- Valves, Spring Loaded Bronze 30
- Valves, Cast Iron & Cast Steel 31

SAFETY WALK NON SLIP SURFACING 282
SALINOMETERS 228
SAMSON TRUCKS 219
SAND 351
SAND & SHOT BLAST HOSE 104
SANDING Belts 280
- Discs 282
- Machines, Portable 291

SASH Cramps 372
- Cord 191
- Tools 334

SAWDUST 345
SAW SETS 391
SAWS, Hack 379
- Hand 391
- Metal Cutting 379
- Portable Electric 292
- Rip 391
- Slitting 419
- Sheet 379
- Tenon 391

SCALING GUN Needle 301
SCALING HAMMERS 383
SCISSORS 389
"SCOTCH" Industrial Tapes 283
- Electrical Products 286

SCRAPERS 389
SCREWDRIVERS, Electric 293
- Hand 380

SCREWDRIVER KIT 381
SCREW Augers 391
- Extractors 403
- Jacks 327
- Pitch Gauges 447
- Slot Cutters 418

SCREW CUTTING GAUGE 446
SCREWING OIL 346
SCREW PITCH GAUGE 447
SCREWS, Allen Head 243
- Cheese Head 251
- Coach 242
- Countersunk 251
- Grub 243
- Metal Thread 251
- Packing 220
- Roofing 254

INDEX

Page

Round Head 251
Self Tapping 252
Set 232
Socket Head 243
Wood 254
SCRIBERS 441
"SCRUINS" 259
SCUTCH TOOLS 384
SERALOCK FACING CUTTERS 418
SELF DRILLING SCREWS 253
SELF GRIP WRENCHES 366
SELF TAPPING SCREWS 252
"SEL-LOK" SPRING PINS 250
SEMI ROTARY PUMPS 100
SET SCREWS 232
SEWERAGE FITTINGS 57
SHACKLES 181
SHAFT BEARINGS 458
SHAFT COLLARS 457
SHAFT COUPLINGS 473
SHARPENING STONES 274
SHAVE HOOKS 389
SHEARS, Portable Electric 300
Timmens Hand 369
SHEET Aluminium 118
Brass & Copper 118
Galvanised 124
Jointing 223
Lead 118
Steel 124
Zincanneal 124
SHEET SAWS 379
SHELLAC 347
SHELL End Mills 415
Reamers 414
"SHEPHERD" CASTERS 209
SHIFTING SPANNERS 353
SHIM Brass 118
Steel 118
SHOVEL HANDLES 388
SHOVELS 387
SHOWER Arms 55
Cocks 52
Heads 55
SHURE SET ANCHORS 260
SIDE & FACE CUTTERS 416
SINTALITE BRONZE BUSHES 461
SILVER Brazing Alloy 142
Steel 422

Page

SISAL ROPE 191
SKIL-SHER PORTABLE ELECTRIC TOOLS 306
SLINGS Case 172
Chain 185
Drum 173
Web-belt 191
Wire Rope 193
SLOT DRILLS 419
SLOTTING CUTTERS 418
SLUICE VALVES 26
SNIFTING VALVES 26
SNIPS, Tinmens 369
SOAPS 334
SOCKET Head Screws 243
Reamers 412
Spanners 356
SOCKET DRILL 401
SOFT SOAP 334
SOLDER 352
"SOLDERINE" FLUX 352
SOLDERING Fluid 352
Irons 394
Paste 352
SOLDERLINE FITTINGS 62
SOUNDING TAPES 444
SPANNER SETS 355
SPANNERS 353
SPEED INDICATORS 452
SPEED REDUCERS 472
SPIRIT LEVELS 393
SPRAY PAINTING EQUIPMENT 159
SPRING CALIPER DIVIDERS 441
SPRING LOADED SAFETY VALVES 30
SPUD BARS 386
SPUNCAST PHOSPHOR BRONZE 121
SQUARES, Carpenters 392
Combination 439
Engineers 440
"STAG" PIPE JOINTING COMPOUND 225
STAHL ELEKTUS HOISTS 162
STAINLESS STEEL Bar 117
Bolts 230
Fittings 90
Nuts 238
Screws 251
Soldering Fluid 352
Valves 4
Washers 236

INDEX

Page

STANDS, Drill 290
STAPLES 255
STAR DRILLS 384
STEAM Cocks 28
Fittings 42
Gauges 225
Hose 106
Jointing 223
Packing 220
Pipe 115
Traps 33
Unions 41
STEAM & WATER MIXER 33
STEEL Bars 125
Clamps 175
Gears 484
Parallels 448
Pipe Fittings 42
Plate 131
Rules 442
Sections 125
Sheets 124
Silver 422
Squares 125
Tool 422
Tube 111
Unions 41
Wire Rope 196
Wool 334
STILLSON TYPE WRENCHES 367
STOCKINETTE 334
STOCKS & DIES 407
STOCK & DIE SETS 409
STONES SHARPENING 274
STOP COCKS, Bronze 26
Cast Iron 25
STRAIGHT EDGES 440
STRAINERS 34
STRAINING SCREWS 190
STRAP HINGES 338
STRING 191
STROKE COUNTERS 452
STRUCTURAL BOLTS 231
STUB DRILLS 399
STUD ANCHORS 258
STUD EXTRACTORS 396
STUDS, ENGINEERS 241
SUCTION HOSE 105
"SUPERITE" STEAM JOINTING 223

Page

"SUPEROID" OIL JOINTING 224
SUPPLIED AIR EQUIPMENT 157
SURFACE GAUGES 441
SURFACE PLATES 449
SURFORM FILES 376
SWAB BRUSHES 334
SWING CHECK VALVES, Bronze 9
SWIVEL SPOUTS 55
SYRINGES OIL 500

T

TACHOMETERS 452
TACKS 255
TAIL PIECES, HOSE 96
"TAMPINS" & TAMPIN TOOLS 258
TANK Cocks 54
Gauges & Water Gauge Mounts 28
TAP AND DRILL GAUGE 447
TAP AND DRILL SETS 402
TAPE, Abrasive 200
Asbestos 221
Insulation 226
Masking 283
TAP EXTRACTORS 424
TAPER-LOCK BUSHES 465
TAPER Pins 457
Pin Reamers 412
Shank Drills 397
TAPES, Measuring 444
Pressure sensitive 283
TAPE DISPENSERS 284
TAP TITE 253
TAP WRENCHES 407
TAPS, B.S.P. Gas 404
Conduit 404
Hand 404
Machine 405
TAR BRUSHES 334
TAYLOR RINGS 227
TECALEMIT EQUIPMENT 494
TEE BOLTS 249
TENON SAWS 391
TENSION WRENCHES 363
T. HINGES 338
THERMOMETERS 228
THERMOMETER CASES 228
THIMBLES ROPE 195

INDEX

Page

THREAD Chasers 410
Dies 408
Gauges 447
Taps 404
THREE-M-ITE ABRASIVES 279
THRUSTOR BRAKES 477
TIMING BELT DRIVES 471
TIN INGOTS 120
TINMENS Rivets 255
Snips 369
TOGGLE BOLTS 258
TOGGLE CLAMPS 453
TONGS 386
TOOL Bits 422
Boxes 395
Chests 360
Handles 388
Holder 422
Post Grinders 316
Steel 422
TOOLMAKERS CLAMPS 440
TOOLMAKERS TOOLS 439
TORCHES 345
TORQUE WRENCHES 363
TORQUE WRENCH METERS 363
TOWELLING FOR FILTERS 345
TRAMMELS 441
TRANSMISSION EQUIPMENT 457
TRAP SCREWS & GRATES 57
TRAPS, STEAM 33
TREACLE GATE 25
TREFNER DRUM SANDERS 281
TRESSELS 351
TRI-M-ITE ABRASIVES 279
TROLLEYS, BEAM 173
TROWELS 393
TRUCK CASTERS 198
TRY SQUARES 392
TUBE, Brass 110
Condenser 110
Copper 107
P.V.C. 102
R.H.S. 131
Steel 111
Wrought Iron 115
TUBE BRUSHES 331
TUBE EXPANDERS 501
TURNBUCKLES 190
TURPS, MINERAL 334

Page

TWADDELL'S HYDROMETER 228
TWINE 191
TWIST DRILLS 397
TURNER BANJO REPLACEMENTS 86
TURNER NYLON TUBE FITTINGS 82
TURNER PRECISION FITTINGS 74
TURNER TURNLOCK FITTINGS 88
TURNER TURNOTS FITTINGS 84

U

UNBRAKO SCREWS 243
UNIONS, Brass Hot Water 60
Bronze 29
Petrol 74
Rotating 503
Solder-on and Solderless 77
Steam 41
UNIVERSAL BEAMS 129

V

VACUUM CLEANERS 300
VACUUM GAUGES 37
"VALIDUS" Globe Stop Valves 6
Check Valves 10
VALVES 1-36
VALVE RESEATER 394
VALVE TWIST 220
VARIABLE SPEED DRIVES 482
VARNISH BRUSHES 334
VASELINE 346
VEE Belts 464
Belt Pulleys 462
Blocks 448
VERSA MILL 420
VERTICAL CHECK VALVES, Bronze 9
Cast Iron & Cast Steel 11
VIBRATION DAMPENER 492
VICES, Bench 371
Machine 373
Offset 371
Pin 440
Pipe 370
Quick Action 371
Woodworkers 371

INDEX

Page

VINIDEX TUBE & FITTINGS 102
VISORS WELDING 149

W

W. D. 40 346
WAD PUNCHES 385
WALL DOMES 56
WASHERS 236
WASHING SODA 334
WASTE, COTTON 334
WASTES, FLOOR 57
WATER, Distilled 228
Gauge Glasses 225
Gauge Mounting Bronze 28
Gauge Protectors 29
Heaters Steam 33
WEB BELT LIFTING SLINGS 191
WEBBING, ASBESTOS 221
WEDGELINK VEE BELT 463
WEDGEROPES 464
WELDING Accessories 144
Electrodes 147
Fluxes 142
Goggles 150
Helmets 149
Rods 142
Sets 132
WELDOLETS 502
WHALE OIL 346
WHEEL BARROWS 218
WHEEL DRESSERS 271
WHEEL PULLERS 396
WHEELED GRAVITY CONVEYORS 213
WHEELS, Caster 199
Grinding 261
WHISTLES 345
WHISTLE VALVES 28
WHITE METAL 122
WICKSTEED TUBE EXPANDERS 501
WINCHES, Hand 169
Swing Stage 171
WING NUTS 239
WIPING Metal 352
WIRE, Black Tie 130
Bronze Non-Ferrous 119
Lead 119
Welding 142

Page

WIRE Brushes 330
Cutters 364
Gauges 447
Rope 196
Rope Grips 194
Rope Slings 193
Rope Sockets 194
Rope Thimbles 195
Strippers 366
WIRE ROPE OIL 346
WOLF PORTABLE ELECTRIC TOOLS 288
WOODRUFF Cutters 417
Keys 457
WOOD CHISELS 390
WOODFAST MACHINES 318
WOOD SCREWS 254
WOODEN MALLETS 382
WOODWORKERS VICES 371
WORM GEAR REDUCERS 480
WRECKING BARS 386
WRENCHES, Adjustable 353
Box Type 362
Chain Pipe 367
Crescent Type 353
Double Ended 353
Open Jaw 353
Pipe 367
Ratchet 356
Ring 355
Self Grip 366
Socket Screw 247
Stillson Type 367
Torque 365
Tubular 362
WROUGHT IRON Fittings 98
Pipes 115

Y

YARN, ASBESTOS 222
YORKSHIRE and **YORKWAY FITTINGS** 62
Y TYPE STRAINERS 34

Z

ZERK NIPPLES 494
ZINCANNEAL SHEET 120
ZINC BLOCKS 124

J. BLACKWOOD & SON LIMITED · SYDNEY